



EYEING A DRAMATIC REDUCTION IN CRIME



The Village of Maywood's visionary wireless broadband video surveillance system is a major reason for safer streets and a revitalized community.

SITUATION

The site of 30 homicides since 2006, the Village of Maywood, Illinois, has proactively worked to reduce crime and improve the safety of its residents.

Located in the near western suburbs of Chicago, the Village of Maywood has been fighting the urban crime triangle of gangs, drugs and violence. Residents were becoming more and more alarmed and business development had been severely impacted. In 2009, the village, led by its mayor, trustees, village manager and chief of police put into place manpower, strategies and technologies that challenged the gangs that loitered on the corners and menaced the community at all hours of the day and night.

TECHNOLOGY SOLUTION

A community-wide video surveillance network based on a combination of two Motorola wireless broadband technologies.

The answer was a collaborative combination of a proactive police presence, stronger community partnerships and advanced technology. Working with a local service provider, the village implemented a video surveillance network featuring cameras located throughout the community.

One of the most formidable obstacles to overcome was the cost of the network infrastructure. Ultimately, the village found the cost-effective solution it needed in wireless technology from Motorola. Maywood deployed a solution that allows broadband access to cameras and Motorola Point-to-Multipoint (PMP) technology for reliable, secure backhaul of video in real time to a central command center.

RESULT

A 15 percent drop in crime, including 365 consecutive days of zero homicides.

Maywood is seeing a 15 percent drop in indexed crime throughout the village, including a year-long period in which there were no homicides in a municipality that just a few years ago averaged one per month. Furthermore, residents feel an increased sense of safety on their streets and in their community. The system also contributes to Maywood's economic development. Business has begun to grow with many new businesses opening and a number of companies expressing interest in locating or re-locating to the village.

CUSTOMER PROFILE

Government Entity

- The Village of Maywood, Illinois

Industry

- Law Enforcement / Public Safety

Motorola Solution

- Motorola 4300 Series Intelligent Access Points
- Motorola wireless mesh wide area network
- Motorola PMP 400 access solutions
- Motorola MeshConnex™ Routing Engine
- Motorola One Point Wireless Manager

Solution Features

- More than 75 video cameras deployed in critical locations
- Real-time high-speed video capture and transport
- Coverage of more than 70 percent of the community
- Centralized real-time video monitoring
- Remote network management and trouble-shooting

FAR-SIGHTED THINKING DELIVERS NEAR-SIGHTED STREET MONITORING

A recent Chicago Tribune article featured a Maywood resident sitting on her front stoop watching her daughter and two friends jumping rope. It was a prototypical neighborhood scene, but it wouldn't have happened just 18 months ago. Why? Maywood residents were afraid then to even sit outside their homes because of the crime that was all too common on the village streets.

THINGS HAVE CHANGED

Now, said the woman, "I feel that it's... a lot better. It's quieter. We used to not sit outside. Now we can sit out... and still feel safe." Since the turn of the 21st century, Maywood, a community of 26,000, had been experiencing escalating rates of crime. In 2007, for example, the village averaged one homicide per month. Now, thanks to resourceful and farsighted city government, things have changed. "What I like the most is that people aren't hanging around on the street corners," the woman continued. "And another reason I feel safe is right over there..." She was pointing at a security camera high atop a streetlight.

WIRELESS VIDEO SURVEILLANCE NETWORK

After deciding to utilize security cameras, the village proceeded with testing a wireless video surveillance solution. Working with local service provider Current Technologies and Motorola wireless technology, the village deployed a test installation at the village's "worst intersection," and in a nearby back alley.

"The test worked well for us," says Maywood Police Chief Timothy Curry. Dispatchers were able to monitor the location, send officers quickly when they were needed, provide situational awareness to the first responders, and continue to monitor the incident as it unfolded to be ready to quickly send backup if necessary. "The security cameras gave us eyes at a problem location," Chief Curry says, "and we were able to respond [faster and] better."

COMMUNITY-WIDE COVERAGE

With one of their critical objectives being to generate a greater sense of safety in the community, officials decided to expand the real-time video surveillance system to cover virtually the entire village. "This was a brainchild of our entire management team," says Village Manager Jason Ervin. The fact is, public safety is crucial not only for Maywood's police department, but also for other departments, including finance, public works and community development. "It made no sense," says Ervin, "to have a business come into town if the people didn't feel safe enough to go to it."

With the help of Current Technologies, the Village planned and deployed a network featuring 79 security cameras located throughout the community, especially in areas community members reported as high crime. In addition to the cameras themselves, the system utilizes two complimentary Motorola wireless technologies to create a reliable, high-speed network infrastructure for data capture and backhaul to Maywood's central police operations center. "Using Motorola equipment mounted on village-owned light poles, we created a high-speed controlled mesh network with primary and secondary backhails for added reliability," says Steve Daugherty, president, Current Technologies. Motorola wireless networks excel at handling the demands of video, delivering consistent throughput, low latency and high bandwidth to produce video images of exceptionally high quality.

LOWER COST, HIGH PERFORMANCE

Opting for wireless broadband to backhaul video footage greatly reduced upfront equipment and installation costs. The wireless infrastructure also gave Maywood police the flexibility of being able to quickly shift or add video surveillance capability when and where it is warranted. The ability to place cameras precisely where they are needed is another crucial benefit of wireless technology. With wired networks, optimum locations must often be compromised because no wire exists in the area. Wireless reliability is also proven. The village has been using the Motorola wireless network for about two years now and there has never been a glitch.

One key to this performance was upfront planning. "The network was meticulously planned," says Daugherty. "We asked the village to tell us everything they wanted to do now and in the future and we planned for that." The network design uses Motorola 4300 Series Intelligent Access Points (IAP) working in sync with Motorola Point-to-Multipoint 400 network access solutions to deliver bandwidth levels that provide good video quality. The frame size is 800 x 600 and the frame rate is 12 frames-per-second. Today, the network provides approximately 70 percent community coverage, with expansion on the horizon.



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Chief Timothy Curry
Maywood Police Department



DETERRING CRIME

Going into the project, says Chief Curry, “our expectation generally was to be able to capture information and review it, and use it as evidence if needed. What we didn’t realize is how it assisted in driving crime down significantly.” In some municipalities, a common issue with video cameras is they serve mainly to “push” crime to other areas. “A subject is not going to knowingly commit a crime in front of a camera,” Curry continues. “But our cameras are not really that visible.” The fact that subjects aren’t sure exactly where cameras are located is an additional factor in reducing crime in the neighborhoods.

VIDEO CONTROL CENTER

In addition to acting as a deterrent, the system also alerts the control center to potentially dangerous situations, and can help in responding to an incident. “In our control center,” says Chief Curry, “we have several big screen monitors each with several cameras visible.” Dispatchers can call cameras up by location or establish a rotation. What they see on the screens works as an extra set of eyes for police on the street, improving situational awareness. “[The system] has actually improved the relationship between officers and dispatchers,” notes Curry. “Somebody is always asking a dispatcher to describe what they see on camera. This is very helpful.”

FUTURE EXPANSION

Where does system deployment stand today? “All our backhauls are in place as are most of the cameras,” explains Ervin. “Plus, the wireless nature of the network allows us to move hardware freely and easily from one location to another as needed.” This flexibility helps mitigate the urgency of faster expansion of the network itself. But the village does have significant use case expansion plans. One initiative is planned to equip more than 20 squad cars with video technology that will allow officers to watch live video of the scene en route. Another will expand usage of the system to the village Fire Department, providing, among other things, live video of the incident scene streamed to fire trucks. Other video-based initiatives may include automated license plate recognition and video analytics.

COMMUNITY REACTION

The goal of Maywood’s video surveillance system is as simple as it is important. Says Ervin, “We want to create a community people feel safe coming to, living in, and doing business in.” How have the residents and businesses reacted to the camera system? “The general consensus has been very positive,” Ervin continues. “The business community has embraced cameras and so have residents.” As reported in the Tribune article, one 10-year community resident said, “It used to be a lot of guys hanging out on the streets... all of that has been stopped pretty much. Police have been doing a good job... [responding] to calls quickly and in reassuring numbers.”

LESSONS LEARNED

Asked what advice he would give to a municipality considering a video surveillance network, Daugherty says unequivocally, “Plan, plan, plan. You must have a good RF design. Figure out what you want to do, then break it into phases and figure out how to do it cost-effectively.” Wireless technology can be a major factor in both network performance and affordability. “Wireless networking technologies developed by Motorola,” Daugherty concludes, “help alleviate [budget] concerns by offering high-performance, reliable and secure connectivity at a fraction of the cost required by traditional wired or fiber approaches.”

In summary, Chief Curry says, “I’ve lived in Maywood all my life and have been a member of the police force for 25 years. [Since we installed the cameras] there’s been a major difference in the crime rate, a major difference in the feeling and the safety in the community. There’s a general feeling of peace in town, and that’s something we haven’t seen in years.”

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Steve Daugherty
President
Current Technologies

ABOUT CURRENT TECHNOLOGIES

Formed in 1997 via a strategic merger of two independent companies, Current Technologies of Downers Grove, Illinois, offers a combined fifty years of experience in the information systems and technologies industries. Partnering with the most respected names in the industry, such as Motorola, the company provides its clients with customized IT, wireless networking and video surveillance solutions with an eye on the future of technology.

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