



## Police in Bellwood Illinois ensure city-wide public safety with Milestone wireless and remote access surveillance from Current Technologies Corporation.

**“It’s important that we’re putting in the IP technology and wireless network that allows you to look at all the options for adding more as you go along. We want this kind of technology built in for future flexibility. It sets up the connectivity for the whole community.”** – Roy F. McCampbell, Comptroller/Chief Financial Officer for Bellwood, Illinois.

**Challenges:** This Chicago suburb of more than 20,500 citizens has neighboring communities with high crime that has potential to spill over into the adjacent areas. Gang activities, guns, drugs, robberies, even murder are future threats to the safety of both citizens and the police who work to protect them. Bellwood has a total of 60 sworn officers, and they have been receiving 28,000 emergency calls to ‘911’ yearly.



**Solution:** Current Technologies Corporation, a Certified Milestone Partner and Cisco Premium Partner, has installed a variety of different wireless technologies to reach into neighborhoods and completely cover the town with a pure IP video surveillance solution, using a mix of network cameras from Sony, Axis, JVC and IPIX. Milestone XProtect Enterprise software is the video management tool for scheduling the cameras, viewing both live and archived images, easy searching, and exporting evidence for court proceedings.

**Advantages:** Police visibility has been multiplied, and the total overview allows them to be pro-active and respond faster to incidences. It is easy to move cameras or add more as needed, and the IP approach allows integration with developing technologies. Citizens, property and officers themselves are safer - and the town’s image has improved notably.

In April 2005, the city of Bellwood, Illinois, accelerated on a new road to security and safety using fast, efficient and flexible wireless technology and pure IP video surveillance.

“Bellwood came to us and said: ‘We want to be associated with the Western suburbs of Chicago that are nice and crime-free, and we believe this is the way to get there.’ Roy McCampbell, the Comptroller and CFO at the Village of Bellwood, and Mayor Pasquale are very committed to making a difference, changing the image of the town, cleaning up crime. Our wireless IP surveillance solution is their main tool,” says Steve Daugherty, President of Current Technologies Corporation, the Systems Integrator partner responsible for designing, installing and maintaining the entire installation.



Twenty-one surveillance cameras quickly grew to over 40 in the risk areas identified by the police: major parkways, public gathering places, and higher crime locations they want to keep an eye on.

“We set up around the perimeter of the city first, at intersections along the main roads that go in and out like Mannheim, St. Charles, and 25th Avenue, then by McDonalds, Walgreens pharmacy, a bar and some liquor stores, a bank, a college, a junior high and middle school,” says Daugherty.

Many other locations are in progress towards an initial goal of more than 60 cameras, including those inside the police building itself. The plan is to have surveillance spread throughout the entire community.



"If cameras are only set up on the east border of the Village, where there's more tendency for crime, it could have the effect of pushing the crime around and moving it further into Bellwood. But the goal is to get rid of the crime, so the entire city is going to be well monitored," explains Daugherty.

**A 'Force Multiplier': more 'eyes' and faster response**

The police cars in the force are equipped with monitors and keyboards that are wirelessly connected to the surveillance system for mobile capacity and instant overview of multiple locations.



"They see the surveillance as a 'force multiplier', increasing the capabilities of their police officers by giving them many additional virtual eyes and ears monitoring the neighborhoods. An officer can physically be in one location and see what is going on in the bordering areas at the same time," states Daugherty.

The radio dispatch people who handle 911 emergency calls also monitor the city's new cameras like a central control room, identifying situations as they develop. This provides the opportunity to be pro-active and ward off incidences that could have progressed into something worse, or to respond faster when something does.

"Just yesterday there was a pretty bad accident at a busy intersection that the radio room could clearly see. They zoomed in to determine that two cars were involved and really smashed up. They immediately called the ambulances and tow trucks, ensuring the right emergency response very quickly," explains McCampbell. "With this surveillance, they are able to stay ahead of what's going on and assess situations better."

Besides the radio dispatch room personnel, Bellwood has over 60 sworn officers: 37 full-time police officers, 20 part-time, and 6 public safety inspectors. Some work undercover, and several of the police cars are unmarked. In addition, they have a canine unit.

**Pilot project in high-crime area Maywood**

The first prototype for Current Technology Corporation (CTC) to test and demonstrate their wireless IP surveillance solution was installed in the higher crime area of Maywood, bordering on Bellwood. One of the most dangerous locations there is a crack house inhabited by a notorious gang, who threatened the CTC employee installing it.

Because of CTC's ability to customize their solution, they are able to implement covert cameras as well as the more traditional ones. "This one is a grey utility box installed on a light pole across the street, with a hidden camera in it," says Chris Moomey, Account Manager at CTC.

In Bellwood, the network cameras with Pan/Tilt/Zoom functionality provide coverage of wider areas, with excellent clarity and recognition of people, license plates, and other details even from far away.

"At midnight one night, I was at the Police Department watching the cameras from 19<sup>th</sup> and St. Charles: through the glass door of a store in the 2100 block of St. Charles, we could identify the face of a wanted suspect TWO BLOCKS AWAY - that's how clear the camera images are!" smiles Daugherty.

**Wireless high-speed connections**

The wireless equipment is set up on several very tall towers throughout the city, one next to the central Police Department, another atop a building that houses a bank and university, another on top of the Bellwood water tower. Satellite dishes and antennae send and receive the signals, connecting the Milestone IP video surveillance system with the cameras.



"The cameras are installed on poles and buildings with power transformers and wireless access points with antennae that communicate with the wireless bridges on the towers," explains Moomey.





"The tower on the bank building has a satellite dish on it sending to a very high-speed wireless connection back at the police department tower, so the cameras in the bank building can be recorded there on the main system server. We're also going to use the bank tower to create a Hot Spot so we can send the wireless connectivity up and down Mannheim Road, allowing us to put more cameras along there, including at the currency exchange. That's a business that has had a history of crime associated with it, people cashing checks, robberies - even a murder once of someone who was followed from there. This obviously makes it a high priority target," comments Daugherty.



"We're working on lots of ideas together with CTC to come up with the best surveillance, including undercover cop cars that can go in with a roving camera to check out a situation before making an arrest," adds McCampbell. "With cameras in the squad cars, the mobility of the solution with remote access is really beneficial."

**World-leading IP video software platform**

The IP-based software for managing the video images is Milestone XProtect Enterprise (XPE), the market leader worldwide. XPE allows scheduling of the cameras and automatic patrolling of the PTZ cameras, with zooming in for more details. The software's database is set to archive the images for a month, which are then exported onto DVD archives for ready access by the state prosecutor or attorneys for the defense in court proceedings, who can subpoena the evidence.

The central system is installed on a server at the main police department. In addition, a video server converts to digital the video streams from some older analog cameras, which will eventually be replaced by color and/or network cameras. This efficient re-use of old cameras ensures a better return on previous security investments. In the police department radio dispatch room, two huge Sony flat screen monitors are set up next to some normal sized monitors, viewing images from the cameras around the city and inside the police facilities.

**Independent mix of hardware for best solution**

"We use a lot of different wireless products to achieve the harmony of the system and depending on the terrain. It's the same thing we do with the cameras, choosing different models and manufacturers to suit the needs of each situation. You have to have a mixture of products when designing a really good surveillance solution," asserts Daugherty. "Thanks to Milestone's flexibility we've had the luxury of testing our system with a multitude of cameras."

The Milestone software platform is independent and central to CTC's customized approach, because it supports the widest choice of network video hardware from the largest number of manufacturers.

"There's a big difference between a camera installation and a pure IP surveillance solution. Installers using the old analog stuff, VCRs and even DVRs, are at a major disadvantage compared to a company like ours, if they are trying to get into the IP approach, because we have worked for over a decade with network implementations and really understand the IT technology. If a customer has multiple locations, it doesn't matter to us where they are - our job is to connect them together. We're network guys and we know how to move data, wired or wireless, whether the data is video images or otherwise," says Moomey.



In addition to the current cameras, CTC plans to put up new network cameras as they become feasible, including some cameras with full 360 degree viewing capabilities and PTZ - and the Milestone software allows a Quad View of all angles at once. Each hardware option gives different functionality for the town's security needs.



**Crime cleanup improves Bellwood town image**

The October 2005 issue of Chicago magazine published a lead article titled ‘How Healthy Is Your Town?’ that diagnosed the well-being of 191 Illinois suburbs and featured Bellwood as one of ten communities to be watched over the coming year. They summarized this town’s visionary crime-free approach as follows:

“Miscreants take note: if you cross into Bellwood, you may unwittingly step into a law enforcement version of the TV show *Candid Camera*. Earlier this year, officials in the town – which with its high rate of violent and property crime had earned the lowest score among mid-sized suburbs – began installing surveillance cameras in the community... The plan is to make every public street visible to remote monitors by 2007. Half the town’s crimes are committed by nonresidents who travel along the Eisenhower Expressway and other nearby high-traffic corridors. Placing the cameras along entry roads like Mannheim and Washington is tantamount to laying out big ‘UNwelcome mats’.”



“We want people to get the message: if you try to commit crimes in Bellwood, we will see you and we will catch you,” concludes McCampbell.

Chicago magazine further reports that Mayor Pasquale is eyeing additional initiatives like community service centers for handling domestic violence, buying buildings to house government employees, re-establishing a paramedic service and extending public transportation.

The mayor and police spearheading public safety through the use of leading-edge technology is a movement that the good citizens themselves are enthusiastically supporting. Daugherty reports that a number of residents have contacted both CTC and the PD with offers to donate their own money for the purchase of additional cameras - in return for adding their properties to the growing security network.

**A wireless community for future growth – and fast deployment**

Bellwood is in transition with another 19 acres just approved for further development including 6-800 new housing units, some commercial development, and Benedictine University. Another 40+ acres of industrial space will be made into a shopping center, police sub-station, and more.



“We’re starting at the ground floor with all of these: it’s important that we’re putting in the IP technology and wireless network so all of it can be connected. It allows you to look at all the options for adding more as you go along. We want this kind of technology built in for future flexibility,” says McCampbell. “It sets up the connectivity for the whole community.”

“In comparison, the City of Chicago’s surveillance is all fiber optic cables, compared to the CTC approach of doing it wireless that gives much more flexibility to put up or take down cameras anywhere, anytime. If you look at the size of Chicago and the time it’s taken for them to set up cameras and dig the trenches for the cables, compared to what we’ve done in Bellwood in just 4 months, we’re way ahead of them and have progressed so much faster,” notes Daugherty.

**Regional approach for better homeland security**

“We’re encouraging other towns in the region to also get onto the network approach. We’re going to be moving to a regional communications center for all our police and emergency response services based in the nearby town of Leyden, anyway, so the more we can standardize our platform, the better we can coordinate and respond. Also, when applying for Homeland Security funds, they prefer a regional approach for better efficiency and effectiveness,” remarks McCampbell. “There are no borders when it comes to crime. We will give access to our cameras to the neighboring towns, swapping access to their towers for more camera feed around their facilities, adding them around building exteriors, schools, water works, whatever. It’s a win-win situation for everyone.”



In cases of businesses adding more cameras inside, hooked up to the community access, one can imagine the benefits. For example, Police could see critical details of robberies occurring inside a bank while rushing to the scene of the crime, and call in extra back-up if needed.

"Firemen currently have to check what is called an 'enunciator panel' that tells them where in the building an alarm has gone off. There's a lot of wasted time doing this, and fires explode with exponential speed. By setting up IP cameras on these, the firemen can see this in advance and be able to respond faster. We'll have maps on each area we can pull up on the monitor screens, showing where all the hydrants are. We're also going to be putting in more cameras and monitors for the water department and public works for better snow operations," promises McCampbell. "We'll feed more cameras into the surveillance system for speed control officers, too – both fixed and mobile."

The Bellwood and Melrose metro stations are going to be combined in the near future. An architectural and construction firm are already working on the design for the station, which could be a prototype for more advanced technologies like license plate ID recognition in the parking lots, sniffing equipment, bomb detection, or other things that can help sort out the passengers – all of it coupled with the Milestone surveillance system.

"We're also going to deploy some dedicated fixed cameras around the city to show on the official Bellwood public website, and on big LCD monitors in the municipality's public building," adds Daugherty. "Privacy is not the issue here: residents are thanking us, saying 'What good is my privacy if I can't walk out of my house without getting shot? The gangs don't leave us any privacy, so we'd rather have the police taking care of it with surveillance.'"



[www.villageofbellwood.com](http://www.villageofbellwood.com), [www.currenttech.net](http://www.currenttech.net), [www.milestonesys.com](http://www.milestonesys.com).