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## Port has 7-eyed watchdog



Alan Koivisto, sales and marketing director with Baycom Inc., Green Bay, shows a transceiver used to control sending and receiving information to the security cameras watching the port of Green Bay. The screen in the background shows images from the cameras at the Green Bay police department. The Business News photo by J.A. Robb

### Homeland Security funds paid for camera system surveying harbor, nearby streets

By Jaime Lieck

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Ever get that eerie feeling that someone is watching you? If so, you're right. The Green Bay Police Department has a few more eyes surveying the area these days thanks to a wireless network and video surveillance system installed along the Fox River.

The seven-camera system was fully operational on May 5. The project cost just over \$200,000 and was funded entirely through the Homeland Security Grant Program.

Green Bay-based Baycom Inc. supplied the system.

Alan Koivisto, director of sales and marketing for Baycom, says the system's wireless broadband capabilities are what make it unique.

With broadband Internet connectivity, the cameras transmit clear, live video without the need for trenching fiber communication lines. The system can also be leveraged for data communication and VoIP.

The cameras have pan and tilt capabilities and can be controlled from any computer with an Internet connection and security access. A 23x optical zoom is supplemented by another 10x digital zoom, and that allows the cameras to focus on small details like faces in a crowd or license plate numbers.

During a recent demonstration, Lt. Paul Ebel of the Green Bay Police Department showed footage from a June 19 accident on the Mason Street bridge. The camera captured the whole scene as traffic unexpectedly slowed and a blue sedan plowed into the vehicle in front of it.

Officers are not actively monitoring the cameras at all times, but a large screen

monitor by the shift commanders' office displays the images.

Officers saw the Mason Street accident and reported it to the dispatch center before anyone on the scene called it in.

The system was just one of several port protection projects for which the city received federal funding.

Ebel said the city of Green Bay would never have been able to fund such a project on its own, and that it was vital to Green Bay's busy international port system.

"For a lot [of foreign vessels], their very first stop is right here in Green Bay," Ebel said. "People say 'Why do we need this to protect our port?' They don't realize that those ships have come from Southeast Asia or South America, and this is their very first stop."

The department has already used the system to monitor international ships, ensuring no unauthorized personnel disembark on U.S. soil.

During the demonstration, Baycom staff showed footage of festival-goers during the recent ShopKo Fireworks Celebrate Americafest and zoomed in on a license plate on a construction vehicle in front of the Riverfront Lofts.

The cameras have a three-plus mile range, although that is naturally encumbered by line of sight requirements.

They record 24 hours a day, and the department has about six months worth of space to store the recorded data.

The cameras are mounted at seven points along the Fox River and the bay.

Due to bandwidth limitations, the cameras relay information to two main access points—one on the roof of the police station and one on a water tower near the bay. Those access points then send the information back to the police data center.

Plans are already in place, however, to streamline the system. According to Ebel, an agreement has been reached to place an access point on the roof of the new 17-story Astor Place Condominiums, slated for completion in 2008. The police department will also have a dedicated communication room in the building.

With an access point and camera there, the department will have a better line of sight and unobstructed view of much more of the city.

Baycom has its own wireless access point mounted on a tower at their Radisson Street location. That camera offers a clear view of traffic on the Tower Drive bridge and can span over to the roofs of the cathedral downtown and even to Lambeau Field. Baycom has granted the police department access to their camera as well.

Ebel doesn't expect to receive any complaints about the camera system invading public privacy. He said the use of security cameras is already widespread.

"Whether you know it or not you're on camera probably 100 times a day," he said.

The system uses a Motorola product called Canopy, already deployed in more than 100 nations worldwide. Koivisto said the system is used in many third world countries, where laying communication lines is not cost effective.

Likewise, the Canopy system is appropriate for commercial applications in which laying fiber is also not feasible, like across a parking lot, for example.

The staff at Baycom estimate it would cost about \$10,000 to post a wireless camera in a parking lot, but most of that would be for system infrastructure. Additional cameras would be less expensive.

As far as Koivisto and Ebel are aware,

the Canopy system is the first application of wireless video surveillance in Northeastern Wisconsin. Several system enhancements are already planned.

"This is just the basics. This is just the start of the system," Ebel said.

Ebel said the department chose the Canopy product because it can be readily upgraded to WiMAX. A new generation of WiFi, WiMAX is a wireless protocol that offers longer-range broadband wireless Internet connectivity than the 300-foot range typical with most Internet hotspots.

A WiMAX system would allow squad cars to have city-wide, high speed mobile Internet access, but the department does not have the necessary equipment at this time.

Currently, officers must drive to wireless access points, sometimes leaving their patrol area, to log in to the department network.

Many other opportunities exist to expand the system or leverage other wireless networks. Ebel talked about the possibility of banks and schools installing similar systems and granting police access for emergencies.

"Think what a difference that would have made at Columbine," he said.

Mobile units are another potential application. Temporary access points could be set up at festivals or at crime scenes and could be run on solar power.

Ebel said they also hope to network with the fire department and other emergency units in the future.

"Someday everything will hopefully be centralized to one system," he said.

Ebel stresses that the system is not just about the security cameras.

"It's the entire public safety communication infrastructure," he said.