

Airport takes Axis cameras under its wings.

Wisconsin airport uses video analytics to detect unusual foot traffic patterns in concourses.



Organization:
Green Bay-Austin Straubel
International Airport

Location:
Green Bay, Wisconsin,
USA

Industry segment:
Transportation

Application:
Safety and security,
video analytics

Axis partners:
Agent Vi,
Milestone Systems

Mission

Serving over 1 million residents in northeast Wisconsin and much of the Midwest, the Green Bay-Austin Straubel International Airport (GRB) faces the same safety and security challenges encountered at transportation hubs nationwide. Between insider threats, TSA challenges and concourse security, public safety officials have their hands full when it comes to the nearly 350,000 passengers that fly out of GRB annually.

Solution

One major concern for airports is the direction and flow of exit lanes, those being the path that passengers take after they disembark and head out toward baggage claim and land transportation options.

Harnessing Axis network cameras with Milestone's XProtect® VMS, GRB integrates an analytics platform from Agent Vi to help detect individuals moving against the flow of traffic or if somebody entered through the exit of the concourse without proper credentials, thus posing a serious security threat.

Result

GRB successfully maintains a selection of Axis fixed, PTZ and thermal cameras to keep the peace at the airport for travelers and preserve the safe and secure environment. Though the cameras have assisted in resolving countless incidents at the parking lot, terminal building or front entrances, those have remained low risk events such as attempts to defraud the parking revenue control system and slip-and-fall occurrences. The airport has upheld an extremely safe environment and continues to grow and expand in new business.



All eyes on the aircraft

The Green Bay-Austin Straubel International Airport (GRB) sees more than 350,000 enplanements, 185,000 pounds of air cargo and thousands of commercial and charter aircraft annually. The two-runway airport is served by three major airlines – American, Delta, and United Airlines – that provide 30 daily departures and connections to destinations around the world.

The airport also hosts a number of support businesses: a parking lot facility, car rental agencies, a restaurant and lounge, gift shops and two Fixed Base Operators who provide maintenance, airline and general aviation refueling, charter services and pilot training. The FAA and the TSA have regional bases of operations at the airport and the U.S. Customs and Border Protection has a new 7,000 square foot facility to clear corporate aircraft entering the United States from around the world.

In this era of heightened vigilance, airports like GRB are recognizing that adding video surveillance and advanced analytics to their comprehensive security systems can be a powerful force multiplier.

Analyzing potential threats

When passengers deplane and head toward baggage claim and transportation options, airport public safety staff and TSA agents are on high alert to ensure that these individuals all head in the direction of traffic out of the active concourse. These exit lanes require monitoring to detect reverse flow and people attempting to move in the improper direction, which automatically raise red flags.

"Ten years ago when we modified our concourses we put in some exit lane technology to provide security without having to station a person at the door 20 hours a day," said Tom Miller, Director for Green Bay Austin Straubel International Airport. "But as that technology neared the end of its lifespan, we were starting to get a number of irregular alarms.

In 2015, GRB decided to replace its old technology with savVi, Agent Vi's on-premise video analytics platform.

The analytics work in conjunction with high-definition Axis network video cameras and a Milestone XProtect® Video Management System to detect individuals going the wrong way on concourse exit lanes and Security Identification Display Areas (SIDA). When an event occurs, savVi automatically sends a visual and audio alert to TSA agents and the airport Public Safety Communication Center. At the Comm-Center, a live-view of the event automatically pops up on the video wall.

With multiple Axis cameras trained on the area, security is also able to ascertain whether the individual made contact with anyone else in the vicinity.

"Agent Vi helped us enhance our surveillance system with real-time event detection, enabling us to respond more quickly to incidents," said Miller. "Plus we configured the analytics with some redundancy to minimize the possibility of a security breach in the sterile concourse."

Coverage from tarmac to tower

"We've deployed over 140 HDTV-resolution Axis cameras throughout the airport," said Mark Hall, the electrician and system installer for the Green Bay airport. "We put them just about everywhere: on our tower, in the parking lot, in the terminal building, at our vehicle drive-through gates. Basically, we cover everything except the restrooms."

While GRB standardized on the Axis network cameras product line, the airport availed itself of a wide variety of camera models and features to address their coverage goals for each location under surveillance.



“The exit lane technology is such an important setup for us. It would be very costly to have to staff someone at the exit lane literally 20 hours a day. For the cost of the Axis cameras and Agent Vi’s analytic platform, the payoff for us is probably less than one year.”

**Tom Miller, Director,
Green Bay-Austin Straubel
International Airport.**

For instance, to watch over passenger foot traffic through the exit lane corridors, the airport uses a combination of AXIS P3344 Network Cameras and an AXIS Q1921 Thermal Network Camera integrated with Agent Vi’s video analytics. To keep tabs on the airfield, GRB deployed an AXIS Q6035-E PTZ Dome Network Camera with 20x zoom on the roof of the terminal. To monitor concourse gate rooms and curbside passenger drop-off/pick-up areas, GRB installed AXIS P3367-VE Dome Network Cameras with P-iris control for optimal image quality in all lighting conditions.

GRB also uses Axis thermal network cameras on the runways to monitor the movement of airplanes, service vehicles and personnel. savVi, Agent Vi’s software, analyzes the camera images to differentiate between people, vehicles and static objects. savVi automatically sends an alert to security personnel when it detects people present in a vehicle-only lane or other restricted area.

In order to meet the standards for an international port of entry, the airport recently installed a USDA-approved sterilizer facility for the handling of international trash and garbage. “We put an Axis camera in the facility to monitor usage,” said Miller. “But it’s really more of a safety issue. The high-pressure boiler system creates steam that sterilizes the regulated trash. We want to make sure that the employee in that standalone facility doesn’t get injured as a result of some system failure.”

“Most of our Axis cameras are fixed and pointed at particular areas that would be of interest,” said Miller. “The Axis PTZ cameras are used to pan across broad areas and zoom in on specific locations like the airfield, the vehicle drive-through gates and so on. We tend to use the higher resolution, wider field of view cameras outside and the lower resolution, narrower field of view cameras inside the terminal building.”

Gathering forensic evidence

Video surveillance has played other critical roles at the airport as well – everything from detecting fraud in the pay parking lot and investigating slip-and-fall incidents.

“The Axis cameras helped us discover an individual who repeatedly tried to scam the parking lot system by using a back-out ticket to save paying for multiple days in the lot,” said Miller. “The camera caught the individual pulling up to the automated entrance, pulling the ticket and then backing out instead of going into the lot. They then walked into the lot and got into another vehicle that had been sitting there for five or six days and tried to use the back-out ticket to pay at the exit. So when they claimed that the time stamp showed they had only entered the lot an hour ago and they were just trying to leave, we were able to review the video and prove that the vehicle they were driving had initially entered the lot on a specific date and time. We gave them a choice: pay what you owe or the Sheriff’s Department will be on the way.”

In case of slip-and-fall claims, GRB also provides video of the incident in question to the airport’s insurance carrier. “The forensic video evidence has really been invaluable in helping us verify who’s at fault and what our liability is,” said Miller.

Taking an intelligent approach to security

Even with a TSA presence, local airports face many of the same challenges as their larger hub-based counterparts yet possess fewer resources to deal with them. Finding ways to quickly neutralize insider threats and tighten concourse security with limited budgets and personnel have become hot topics for action. What many smaller airports like Green Bay Austin Straubel International are learning is that adding video analytics to their surveillance systems provides the essential force multiplier they need for early detection and rapid response to potentially threatening situations.



About Axis Communications

Axis offers intelligent security solutions that enable a smarter, safer world. As the market leader in network video, Axis is driving the industry by continually launching innovative network products based on an open platform - delivering high value to customers through a global partner network. Axis has long-term relationships with partners and provides them with knowledge and ground-breaking network products in existing and new markets.

Axis has more than 2,500 dedicated employees in more than 50 countries around the world, supported by a global network of over 80,000 partners. Founded in 1984, Axis is a Sweden-based company listed on NASDAQ Stockholm under the ticker AXIS.

For more information about Axis, please visit our website www.axis.com.