Exceeding TSA mandates with Axis.

Axis network cameras give Orlando-Sanford International Airport a flexible security tool to keep travelers safe.

Organization:
Orlando-Sanford
International Airport

Location:
Sanford, FL, USA

Industry segment:
Transportation

Application:
Security and access control

Axis partners:
SiteSecure, Genetec

Mission

Like all airports, Orlando-Sanford International (SFB) must meet strict TSA guidelines regulating the use of security cameras. However, as one of the top 30 busiest airports in the country (2013), they knew analog cameras would no longer be sufficient to meet their security needs. In 2004 the airport began taking steps to bring its surveillance system into the digital age. Within two years, the transportation hub decided a total IP solution would provide a better return on investment in terms of sharper image quality, easier preventive maintenance and greater camera longevity.

Solution

Working with Axis partner SiteSecure, a Sanford, Florida-based IP security solutions provider and subsidiary of Miller Electric Company, one of the largest electrical contractors in the country, the airport began replacing its legacy analog cameras with high-definition fixed dome and PTZ (pan/tilt/zoom) Axis network cameras.

The cameras are managed through Genetec's Omnicast and Security Center video management systems operated in the airport dispatch center. The video surveillance system integrates with the airport's access control system to provide video verification of access control events.

Result

Based on the success of their initial installations, the airport continues to find many new places to expand coverage beyond the fence line and gate security requirements mandated by the TSA. Today the Axis cameras monitor passenger bridges, terminal lobbies and hallways, tarmacs and runways, car rental facilities, parking garages, passenger drop off points and more. Surveillance cameras also augment security in the campus flight school dormitory and stream video from the airport police department's off-site gun range.

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Meeting and surpassing security requirements

Once a Naval air station, Orlando-Sanford International Airport (SFB) now serves as the secondary commercial airport for the Orlando area. Following TSA and Homeland Security airport protection mandates, the aviation hub arms every door and gate leading to the runways with access control devices and monitors them with video surveillance cameras.

With roughly over a quarter million take offs and landings a year, Orlando-Sanford International soon determined that their legacy analog technology could no longer provide the robust and intelligent video surveillance capabilities they needed to effectively secure the airport.

Systems integrator SiteSecure recommended they replace their analog system with Axis network cameras running on a Genetec Security Center VMS. The new digital system would provide greater resolution, more precise control and the ability to scale quickly and efficiently.

The airport began upgrading to an IP-based system by connecting their analog cameras to video encoders. Seeing the improvement, they decided to commit to a pure IP solution for the future.

"The number one reason [we moved to total IP] was cost savings—the ROI was much better," said Jerry Crocker, director of IT for Orlando-Sanford International Airport. "We were also impressed by the longevity of the Axis camera, the quality of the video and the ease of preventive maintenance."

To minimize spare parts inventory and simplify maintenance, the airport decided to standardize on four Axis camera models.

The outdoor AXIS Q6034 PTZ Network Cameras sit atop poles at every gate to follow individuals entering and exiting the premises. The airport installed AXIS P3344 Fixed Dome Network Cameras further down the pole to capture the access control card reader and the face of the motorist entering the gate. AXIS P3344 Network Cameras are also used on interior doors leading out of the terminal.

This way they can monitor the flow of traffic leading to and from the secured area. The interior fixed dome cameras are complemented by indoor AXIS P5534 PTZ Network Cameras to monitor lobbies, waiting areas and long hallways. The wide angle AXIS M3113-VE Network Camera was chosen to monitor the passenger boarding bridges and multi-door hallways as well as to augment security in their flight school dormitory.

Eliminating blind spots

The increased security awareness the cameras provided led the airport to expand their system far beyond what was required by federal regulations. As of 2014, approximately 200 of the 580 cameras in and around the airport are in locations required by the TSA. The rest are in areas the airport's operations teams identified to the IT department as potential blind spots, and they continue to add more cameras on a regular basis. For instance, the security team requested that a camera be installed at the top of the escalator which would allow airport police to easily capture the face of anyone coming into the terminal.

"We have several different departments that come up with suggestions for deploying cameras. They go to the airport police with their needs and the police come to us to find out how to do it and what it will cost," said Crocker. "It's a great process that ensures that IT and law enforcement departments cooperate effectively and focus on projects that best support the interests and security of the airport."

The security system streams back to a dispatch center which monitors live video of every access control event. Operators can also review archived video for forensic investigations, as well as make copies of specific clips to share with TSA agents, the FBI, US Customs officials and other federal agencies.

A series of large screen monitors provides a mosaic of at least 40 video tiles each. Adjacent monitors display access control maps with overlay of camera location throughout the airport property. The monitors enable dispatchers to keep a vigilant eye on customers, employees and vendors entering and departing from the terminal whether by foot, by car or by air.

"We record everything in hi-def," said Bill Stack, senior software engineer for Orlando-Sanford International Airport. "So when we digitally zoom we can identify facial details, clothing logos and so much more that we couldn't with our old analog cameras."

A million flights, a million stories

Orlando-Sanford International experiences many of the same security events as other busy airports of comparable size: everything from customers trying to pass off phony IDs to fender benders at high traffic intersections on airport roadways.

"We recently had an event in which someone was wanted by police in another county," said Stack. "Through our license plate recognition features in Security Center, we were able to identify the person coming onto the campus at night. From there, we followed their vehicle with the Axis cameras through the parking lot and continued to follow the individual in the terminal. With this video, we were able to supply our fellow law enforcement officials with actionable video."

There have also been some incidents of a more unusual nature on airport property that have been captured on video.

"We put a couple of Axis HDTV cameras on top of the airport cell tower which gives us a great birds-eye view of our campus and the surrounding property," said Crocker. "One time, some teenagers were running from the police after breaking windows on a nearby building in the adjacent railroad yard. They hid themselves by lying low on top of a train car where they could look down at the officers but the officers couldn't see them. Our dispatch officers spotted the teens on camera and led the cops right to them."

The airport is also home to a company that builds aluminum structures. With aluminum bars worth $300 to $400 on the recycling black market, they make an inviting target for thieves. On one occasion, a man jumped the fence, stuffed aluminum shaving into his pocket, and then ran away down the railroad tracks. The whole sequence was caught on camera," said Crocker "The dispatcher instantly shared the information with the local police, and they apprehended the man with the shavings still in his pockets,"

"The big thing that Axis and Genetec offer us is that when an incident happens, the video pops up in our access control maps directly from Axis camera. That gives us a live feed that we could not get in past generations of our system," said Stack.

About Axis Communications

Axis offers intelligent security solutions that enable a smarter, safer world. As the global 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 2,000 dedicated employees in more than 40 countries around the world, supported by a network of over 75,000 partners across 179 countries. Founded in 1984, Axis is a Sweden-based company listed on NASDAQ Stockholm under the ticker AXIS.

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