A Tennessee airport ramps up safety with Milestone wireless IP video surveillance.

"The corporate accounts have insurance requirements we couldn't meet before our force came on board and this system was installed. So we have lured business into this airport because of the new technology. As a matter of fact, the FAA is bringing other people in to see this system because they want to make other airports aware of its capabilities." Joe Johnson, Chief of Public Safety at the Smyrna/Rutherford County Airport Authority in Tennessee

Challenges: Smyrna Airport previously had only six analog Pelco cameras running over coaxial cables to videotapes that gave poor quality and required heavy manual operation. They also had no fiber optic cable around the 1,700 acre facility, so a new networked system would require wireless technology to afford total coverage.

Solution: Dynamark Security has delivered the airport's new wireless security solution that includes a mix of Panasonic KX series PTZ network cameras, with Pelco analog cameras being converted to digital images via Vivotek video servers, all of it managed by Milestone XProtect Enterprise IP video surveillance software. Dynamark has also integrated the video surveillance with an access control system using Galaxy Systems access equipment and software. The wireless technology combines various off-the-shelf products with Dynamark proprietary components.

Advantages: The airport Public Safety Officers have gained full overview of the widespread facilities via one system that is flexible and scalable, making efficient re-use of existing hardware while introducing the IP platform that will serve them well for planned future growth. Adding new cameras anytime is easy, and remote access provides the ability to monitor activities anytime, from anywhere. The Milestone XProtect securely encrypted evidence has already proven useful for sharing images with other authorities to handle prosecutions or to resolve other issues.

Just a short drive from metropolitan Nashville, the campus style of the Smyrna Airport complex caters to the private, charter, and corporate aviation market, with 8,000 and 5,500 foot runways and more than 60 acres of ramp space. Flight training is also a big part of the airport's activities, as is aircraft structural repair, avionics work, plus airframe and power plant maintenance for everything from single engine rotorcraft to large transport jets.

The Smyrna/Rutherford County Airport Authority has a total of 1,700 acres. A new Terminal and Business Center is the cornerstone of a 400-acre Airport Business Park. The Terminal offers 15,000 square feet of space to accommodate public access areas, pilot lounge and scheduling areas, a weather center, multi-use conference facilities, and the Airport Authority offices.

Originally constructed in 1942 as an Army Air Force Base, Smyrna Airport has a long history and a bright future.

milestone

There's a combination of military, corporate and small business services as well as significant flight training with over 100,000 flight operations per year. The airport's Air Traffic Control Tower is staffed 7am-7pm and the Public Safety Division is staffed 24 hours a day, seven days a week.

The airport's eight Public Safety Officers are cross-trained in police, fire and rescue (Emergency Medical Services). All are State of Tennessee certified police officers.

Finding a security system better than DVRs

"One of the challenges for us was finding a vendor who could deliver a system we could control ourselves after installation. We looked at some other airports' systems, but when we found Dynamark and the Milestone solution, we could see right away it was what we wanted," recalls Chief Joe Johnson, Public Safety Chief at Smyrna Airport. "When our department first started in 2004, we only had six Pelco analog cameras on the terminal building. Dynamark understood exactly what we needed: to be able to do the camera installation and system setup ourselves, to save on costs. They provided training and continue with good support."

Smyrna Airport started to use the new Milestone system in February 2006. They have a camera at every gate entrance and two PTZs on the new terminal building; one PTZ is on top of the control tower that gives a very good overview of the entire sweep of the airport. They can move the cameras around and add new ones anytime: the wireless network system is totally flexible.

"Before, with the analog setup, there was no flexibility. When we got our new network cameras, we said 'WOW that's clear!' We get a really good picture of everything now. We really like it," attests Johnson.

Wireless reach and flexibility

The airport had no fiber network, so the new surveillance system had to be set up to operate on a wireless network with over a mile to cover for some of the cameras.

"Dynamark has an advanced wireless system that works just great for us," confirms Johnson. "When we finish the whole project over the next few years, we'll be able to watch the entire site with our cameras. We've got the infrastructure in place to run lots of cameras, so it'll just be a matter of adding new ones in future, buying the extra Milestone software licenses for them."

They have a terabyte of data storage; the PTZ cameras run 24/7 and the fixed ones are set up in the software to record only on motion detection to save on space in the image archiving. They have not even used a quarter of their hard disk in six months, but plan to store the data onto another network drive on their mainframe server every 60 days, transferring to CDs to file evidence.

"Our plan is to have 64 cameras and added coverage of each of the runways from start to end. We'll put another PTZ on the tower, too. We've got poles at all of our gates for cameras and the wireless connections. We're also interested in getting some infra-red low-light cameras

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that get the best coverage at night. We'll be upgrading the 'scissor' gates to bar access models," relates Johnson. "And we'll get every upgrade of the software to always be on top of the latest technology."

The FAA recommends that every commercial airport provide enhanced law enforcement and security by June 2007.

"We are ahead of schedule: we've already had our FAA and TSA inspections. As a matter of fact, the FAA is bringing other people in to see this system because they want to make other airports aware of its capabilities," states Johnson.

Incidences handled quickly with securely encrypted evidence

Smyrna Airport has a Volunteer Training Site for the military. A portion of the East side of the airport is their territory – there is a massive growth project to move flight training for all the military branches here to Tennessee. Chief Johnson's officers cover safety matters for the commercial side of the business, doing all the law enforcement on the base. They also handle all the aircraft-related fire matters.

"We watch the aviation side of the airport base with the tower camera – we have excellent coverage. The primary security goal is to lock the airport down, to control ingress and egress. We make sure no one gets through the gates who should not," says Johnson. "Our officers do a great job with the surveillance! And word gets around. Now everyone knows we are the real deal, they know we're watching them and that we've got control over our facility," smiles Johnson. "That also works as a deterrent."

The airport officers also have used the Milestone software for dealing with an accident at the airport. The pilot landed short of the runway, and it turned out that he had lost his license due to medical reasons. The authorities were pleased to learn that the video images were encrypted so they could prove there had been no tampering with the evidence of the event.

"The new system has really helped us a lot to monitor the facility. Any movement that happens at night, we've got it set up in the software to send an alert to check it. We're on duty 24 hours a day. If someone tries to fly in some illegal cargo or tries to compromise our airport security, I'm going to track him and catch him!" asserts Johnson. "And just this morning, we had a fuel tanker hit a fence, so we've been working that case with the Milestone images to resolve how that happened."

Not just security but maintenance management, too

"We can see if there's any physical damage after storms or if we get leaks in the buildings. We also saw some road issues and were able to follow up with the Milestone images to get that handled. There are building projects going on, as well. The Milestone system will prove to be invaluable and allow us to manage so many things," says Johnson.

He has learned how to handle the XProtect PTZ pause mode to lock in a view and look closer at the details by zooming in to the camera images. After a few minutes, the camera goes back to its patrolling schedule that was set up in the software administration.

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"I also like the HotSpot Window function in XProtect that lets me see camera images in full screen mode on one monitor next to the other screen that shows the full overview of more cameras. I use the Carousel feature that rotates all the cameras in the HotSpot window sequentially," states Johnson.

Software approach allows integration with access control

Dynamark installed and integrated a Galaxy access control system with the Milestone surveillance system at Smyrna Airport. This connects video verification to show who is coming in through gates and doors, and compares it to photo badging on file in the access control system. Both systems run on the same processor.

"Dynamark did an excellent job for us on that," attests Johnson.

Mike Guerra is the airport's Public Safety Officer who handles all the networking, access and video system management at Smyrna Airport. He had this to say about the new system: "I spent about seven months looking at several different systems for the airport. About halfway through the search I came across the Milestone system. I was greatly pleased with the user-friendly interface, its ease of operation, and its capabilities for expansion. With the help of Dynamark and their wireless technology, I was able to put the Milestone software into a practical application for the airport. I am looking forward to the future and the opportunity to increase the camera coverage around the airport using the Milestone system."

Lift off to a successful future

This is a growing business region with corporate headquarters of companies in diverse industries like pharmaceuticals, auto manufacturing, lumber, printing, and many more moving into the area. Smyrna Airport is therefore very well situated for the community's increasing travel needs: in the heart of Tennessee and the geographic center of the Eastern United States, with a climate that stays mild during the winter season.

New fleets of micro-jets are being ordered in the US, and recent reports indicate that corporate business and commuter 'taxi' flight services are going to increase significantly in the coming years. Smyrna Airport is ready.

"The corporate accounts have insurance requirements we couldn't meet before our force came on board and this system was installed. So we have actually lured new business to our airport due to the Milestone IP video surveillance technology," concludes Joe Johnson.

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