

Cracking the case with Axis.

University of Tulsa elevates campus surveillance to an art form with Axis high-resolution network cameras and Agent Vi analytics.



Organization:

University of Tulsa

Location:

Tulsa, Oklahoma, USA

Industry segment:

Education

Application:

Campus safety and security

Axis partners:

JTI Security, OnSSI,
Agent Vi

Mission

As the University of Tulsa's (TU) aging analog cameras began to fail, they started replacing them with a mix of IP-based technology from multiple vendors. Within a year, those cameras failed, which led the university on a search for a more reliable alternative. They were seeking a solution that could deliver better resolution and support an array of analytics to address the typical security challenges of an urban campus. The system also needed to be advanced enough to protect priceless artwork and artifacts housed in the Gilcrease Museum as well as the newly constructed Helmerich Center for American Research, both managed by the university.

Solution

With guidance from JTI Security, a Tulsa-based integrator and Axis partner, the university replaced its end-of-life analog cameras with more than 300 high-resolution, fixed dome and pan/tilt/zoom (PTZ) network cameras from Axis. Each camera model was chosen based on its ability to deliver crisp, high-quality video in specific lighting conditions.

Agent Vi and other analytics embedded in the cameras provide real-time and forensic assistance in investigating events. The few legacy cameras still in working order are attached to Axis video encoders and integrated into the network-based surveillance solution. Campus security monitors and controls the cameras remotely from the university's Dispatch Center through an OnSSI Ocularis video management system (VMS).

Result

The ability of the cameras to capture exceptional video quality helped campus security locate a student's stolen property in just 37 minutes. In another instance, camera analytics also drew security's attention to a car moving erratically in a parking lot; staff immediately contacted local police who dispatched paramedics to the scene and saved the life of the driver who was having a stroke.



Urban approach to urban campus security

Located in the heart of Tulsa, Oklahoma, the University of Tulsa faces the typical security challenges of an urban campus, including a gamut of lighting environments that proved too much of a challenge for its existing camera system.

Given events on U.S. campuses in recent years, the university's Department of Campus Security decided to re-evaluate its whole surveillance operation. It spent a year testing and rejecting a variety of IP-based cameras before turning to JTI Security. The integrator recommended a portfolio of Axis fixed dome and PTZ network cameras that could provide superior video quality even under difficult lighting conditions. To maximize performance, the legacy DVRs were replaced with OnSSI servers and an OnSSI Ocularis VMS.

"A majority of the cameras that the university purchases were high-definition AXIS P33 Series Fixed Dome Network Cameras," noted John Edwards, Owner and President of JTI Security. "Their broad feature set covers about 80 percent of the applications TU has."

AXIS P33 Series includes cameras with Lightfinder for color video even in extremely low-light environments, infrared LED accessories for areas with no lighting, wide dynamic range for locations with bright sunlight and shadows in the same frame and two-way audio. Other high-definition Axis camera models that JTI installed included AXIS P55 Series PTZ Network Cameras in the football stadium to monitor game crowds and AXIS Q17 Series Fixed Network Cameras in select parking lots.

The cameras cover a wide range of venues including entranceways and hallways, computer labs, practice rooms, the football stadium, and sports facilities. Also included are the Performing Arts Center, Student Activity Center, parking lots, and dorms.

Catching a thief or a good Samaritan

When a student who had been sitting on the patio outside the dining hall reported a stolen item, campus security reviewed the video from the AXIS P3384 Fixed Dome Network Camera mounted inside the entrance to the building for forensic evidence.

"The camera looks out through the glass doors and was able to capture a good image of the person involved in the incident," commented William Redding, Assistant Director of Security Technology and Card Services. "It was a bright sunny day, but the wide dynamic feature on the camera was able to capture all the details, from the sneakers he was wearing to the kind of hat on his head. We would never have been able to see anybody through that doorway with our older analog cameras or even some of our older non-Axis network cameras."

By comparing the time-stamped video to an access control report of student ID card swipes, security was able to identify and apprehend the suspect in just 37 minutes. The item was returned to its rightful owner and the thief faced university disciplinary action.

TU also used the combination of cameras and swiped ID cards to track the whereabouts of missing artwork from one of the engineering buildings. The video revealed that a custodian had accidentally knocked it off the wall and took it to his supervisor.

Saving a life

In another instance, Redding was testing out an AXIS Q1765-LE Fixed Network Camera in a campus parking lot one rainy night to see if he could read the license plate of the vehicles. "The dispatcher was monitoring the camera and noticed a car enter the closed parking lot at the back of the building. Despite the rain we could easily identify the kind of vehicle, the color, even the license plate number," Redding remembered. "On our older camera the vehicle just looked like blur."



The dispatcher noticed that the car was moving erratically all around the lot, so security immediately contacted the local police who dispatched an ambulance. "We learned that the individual driving the car was suffering a stroke," recalled Redding. "If the Axis camera hadn't picked up the details of that car, who is to say whether that person's life would have been saved?"

Escorting co-eds

The live demonstration of the university's surveillance system always draws a crowd at freshman orientation. "Parents love seeing all the different protocols we have in place to watch over their kids, not just during the day but all night long as well," said Redding.

One added precaution is the cross-line detection analytic that Redding uses in the Axis cameras covering the parking lot adjacent to the female dormitory. Programmed to trigger alerts to the Dispatch Center between 11 p.m. and 6 a.m. whenever a vehicle enters the lot, security can then take manual control of adjacent PTZ and wide angle cameras to observe the student parking the car and safely entering the dorm. Or if it appears that a driver is loitering or driving aimlessly around, security officers are immediately dispatched to the lot to determine the individual's intentions.

Spotting objects left behind

TU also uses Agent Vi analytics to detect objects removed and objects left behind, especially in the Performing Arts Center, which is located on a busy public street. "The analytics help us track the whereabouts of expensive artwork if it's removed from the wall. We often find ourselves using it in the busy lobby area to help students find where they left their bags," explained Redding. "Equally important - it alerts us to someone walking in off the street, dropping an object and leaving."

Protecting priceless artwork and artifacts

In addition to the usual residential halls, academic buildings, parking lots and other campus venues, TU is also the steward of two city properties: the Gilcrease Museum of American history and art and the Helmerich Center for American Research, which houses the Gilcrease Library and Archive. JTI Security will be swapping out over 120 legacy cameras in the 66-year-old museum with new AXIS P33 Series cameras to protect the world's most comprehensive collection of art and artifacts from the American West, including Native American relics, historical manuscripts, documents, and maps. TU also installed a number of AXIS Q1765 Fixed Network Cameras in the parking lots surrounding the two buildings to keep close watch on the grounds around the clock.

"We'll definitely have a very large footprint of cameras with IR LEDs because, like most museums, the Gilcrease is dimly lit to protect the priceless artwork," Edwards asserted.

JTI Security and Redding also worked together to design state-of-the-art surveillance for the newly built Helmerich Center for American Research next door. The facility stores artwork not currently on display at the museum and provides high-tech cubicles for researchers to check out and examine more than 100,000 rare books, documents and unpublished works archived on the premises. Each of the 17 cubicles is monitored by AXIS P3367 Fixed Dome Network Cameras to deter vandalism and theft. "All the windows automatically change tint to block out any harmful sun rays, so we needed a camera that could deliver super high-resolution under those conditions," explained Edwards.

"Given past events at other universities across the country, we knew we needed to re-evaluate our whole surveillance operation. We wanted a more reliable system with good quality video that could keep us abreast of what was happening on our campus, at the museum, and our research center. The Axis portfolio of cameras more than fit the bill."

William Redding, Assistant Director of Security Technology and Card Services.



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 2,100 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.