University of Antioquia

in Medellín, Colombia

Tyco Security Products offers protection for valuable assets and safety for students and staff at the second largest university in Colombia

The University of Antioquia, the oldest public university and second largest university overall in Colombia, installed CCTV, fire prevention and access control systems to protect entrances, classrooms and offices using integrated solutions from Tyco Security Products.

Access Control, Video, Location-Based Tracking and Intrusion. UNIFIED.

CASE SUMMARY

Location:
Medellín, Colombia

System Installed:

Software House
C-CURE 9000 Access Control
iSTAR Pro Controllers

Kantech
EntraPass Corporate Edition

Exacq
exacqVision Pro VMS Software

DSC
PowerSeries Control Panel PC1864

American Dynamics
SpeedDome Ultra 8E 35X Cameras
VideoEdge NVR

Introduction

The University of Antioquia (Spanish: Universidad de Antioquia), also known as UdeA, is a public, regional, research university based primarily in the city of Medellín, Colombia, and has offered higher education degrees since 1803.

The university is spread across the city of Medellín, with University City (Ciudad Universitaria) as its main campus. The university is comprised of eight campuses, three schools, three institutes and an administrative building. It also hosts the University Museum, the University Theater, the Central Library and the university's sports arena. Nearby is the Department of University Research (Sede de Investigación Universitaria - SIU), where specialized research projects are conducted and where the highest technological resources of the UdeA are housed.

On a typical day, nearly 35,000 people work and study at University City, including students, professors, employees, contractors and visitors.

Monitoring visitor activity and loss prevention on campus were the primary concerns for the security teams at UdeA. Theft was a significant issue, costing the university close to $150,000 every year in IT equipment. In addition, critical updates to the fire prevention and protection systems were required, since the installed systems were inadequate and did not comply with current Colombian regulations.

Challenges

The main security challenge for UdeA was the theft of IT equipment from classrooms, offices and storage rooms. It was nearly impossible to determine who was responsible for the incidents, since there was no system in place to track the entry or exit of electronic devices from their assigned locations. Added to this challenge was the university's open campus, where essentially anyone could enter the campus without be required to present identification or access control credentials.

The university did, however, possess records containing the names of all students, employees, and contractors who had been to the campus. Unfortunately, this information was housed on at least five separate databases that were not connected to one another. "Despite having a wealth of data on prior visitors, people still walked in and out of the campus and its buildings and rooms whenever they wanted, through the different entrances, with no control at all. This became an issue of public safety inside the university," said Javier Toro, Electronic Security Consultant and Auditor at the University of Antioquia.

The fire protection systems installed on the campus presented an additional obstacle, as it was not adequate for the site and because personnel lacked proper safety training and protocols to follow. The university also wanted to implement a physical security system that would allow for updates and expansion in the future.

Segurtec Limited, the integrator who led the project, recognized implementing an access control system from Tyco Security Products as a key element in creating a security system that would meet the university's needs today and in the future, including seamless integration with the existing intrusion panels to secure six entrances on campus.

Solution

When the project began, the first step was to secure critical spaces, such as specialized classrooms and offices that contained expensive IT equipment. This was achieved with the installation of intrusion alarm panels and a video surveillance system from Tyco Security Products, integrated into one central command center for easy management by university security personnel.

Once the access control system was in place, the entire University population could be monitored — from students, professors and staff to graduates and retirees — using magnetic stripe swipe cards. The access control system provides coverage for the entire perimeter of the University City, the library, the Extension Building, specialized classrooms and offices, including main entrances to facilities where there is a significant amount of traffic.

Concurrently, IP surveillance cameras were added all over the campus, increasing the total number of IP and analog cameras in use to more than 300.

"Our staff and faculty kept asking if we can add more cameras. Everyone is very happy with the addition of dome cameras and with the entire project. People feel safer here, which is important," said Toro.

With the added bandwidth use by the installed IP cameras, the university added a new dedicated fiber optic system with a 10 GB speed to exclusively transmit electronic security data. The new fiber optic system was installed in all of the campus' buildings and was extended to the SIU research facilities, which is a few blocks away from the University City, where the monitoring center is located.

Recorded video is managed using network video recorders from Tyco Security Products, with a dedicated communications rack that holds 10 servers to provide approximately 70 terabytes in storage capacity and operate all of the systems (software, applications and database). According to Toro, some of the servers are used to process the daily data workload and others are used for redundant storage.

From the university's control center, security staff can monitor video throughout the campus. A video wall and smaller video screens throughout the control center enable staff to consistently monitor the campus, and integrates with the access control system to provide a clear picture on events. The system currently covers the main campus and extension course building, with plans to extend the video management system to cover the library and a museum on campus.

In addition, the university has leveraged the capabilities of its access control platform, also from Tyco Security Products, to control door and turnstile access points.

According to Segurtec Limited, the most challenging part of the process was the replacement of panels and keyboards, as well as updating the infrastructures with proper tubing and wiring to ensure the highest stability of the system. The most critical component was the migration of databases to the access control platform, because the migration had to be seamless. If any errors occurred, some people could potentially find their access control credentials unusable and they would not be able to enter the university campus.

Both Toro and Segurtec Limited are "very satisfied" with the project, largely because it has reduced theft significantly and helped to control other illicit activities. Identification verification is now required of all visitors,

which helps to keeps track of all people inside the campus at all times. In addition, the university has saved money due to the decrease in theft.

The Future

The final phase of the project, which includes the fire protection systems, will be completed in the middle of 2015. According to Toro, this final phase will meet the Colombian Code for Seismic Resistant Constructions, which mandates that "all public buildings must have a fire detection, suppression and an audio evacuation system." By 2015, all 29 buildings on campus will have proper fire protection systems installed.

Segurtec Limited explained that each building will have one alarm panel, sirens, strobes and emergency levers for manual activation. This platform will be linked directly to the access control platform for the management of the surveillance system and alarms, should an event occur. Also, there will be recorded messages for four different stages of an event, starting from the lowest level, which is an alert for caution, to the highest level, a full premises evacuation message. He said in the near future the university may look to invest in a building automation system for lights, HVAC and elevator management system.

The Customer – University of Antioquia

The Antioquia University, known as UdeA, is a public higher education institution founded in 1803, based in the city of Medellin, department capital of Antioquia. Its object is to search, develop and dissemination of knowledge in human studies, science, arts, philosophy and technology, through investigation, teaching and university outreach in undergraduate and graduate programs, in classroom, blended learning, open and distance education methodologies.

The Solutions Provider – Tyco Security Products

Tyco Security Products is a unified group of the most comprehensive world-leading premium access control, video, location-based tracking and intrusion solutions in the security industry. Tyco Security Products conducts business in over 177 countries around the world, in multiple languages and employs over 2,800 employees globally, including research and development, marketing, manufacturing, sales, service and logistics teams in the Americas, Europe, the Middle East, Africa, and Asia Pacific. Our products, built by developers from all product disciplines, consistently allow customers to see more, do more, and save more across multiple industries and segments including healthcare, government, transportation, finance, retail, commercial and residential. Worldwide, Tyco Security Products helps protect 42% of Fortune 500 companies, transportation systems on five continents, 37% of the world's top 100 retailers, over two million commercial enterprises, thousands of students in more than 900 educational facilities, and over five million private residences.

The Systems Integrator – Segurtec Ltda

Segurtec Limited is full-service security systems integration firm for commercial and residential installations of intrusion, fire alarms and detection, surveillance, physical access control and high range communication systems. Committed to offer a high level of technical service with qualified staff, Segurtec Limited's engineering department offers consulting, training, solution and project development, including technical support in all products areas.

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