Customer Study

Puerto Rico Upgrades, Centralizes Video Management For Effective, Island-Wide Security

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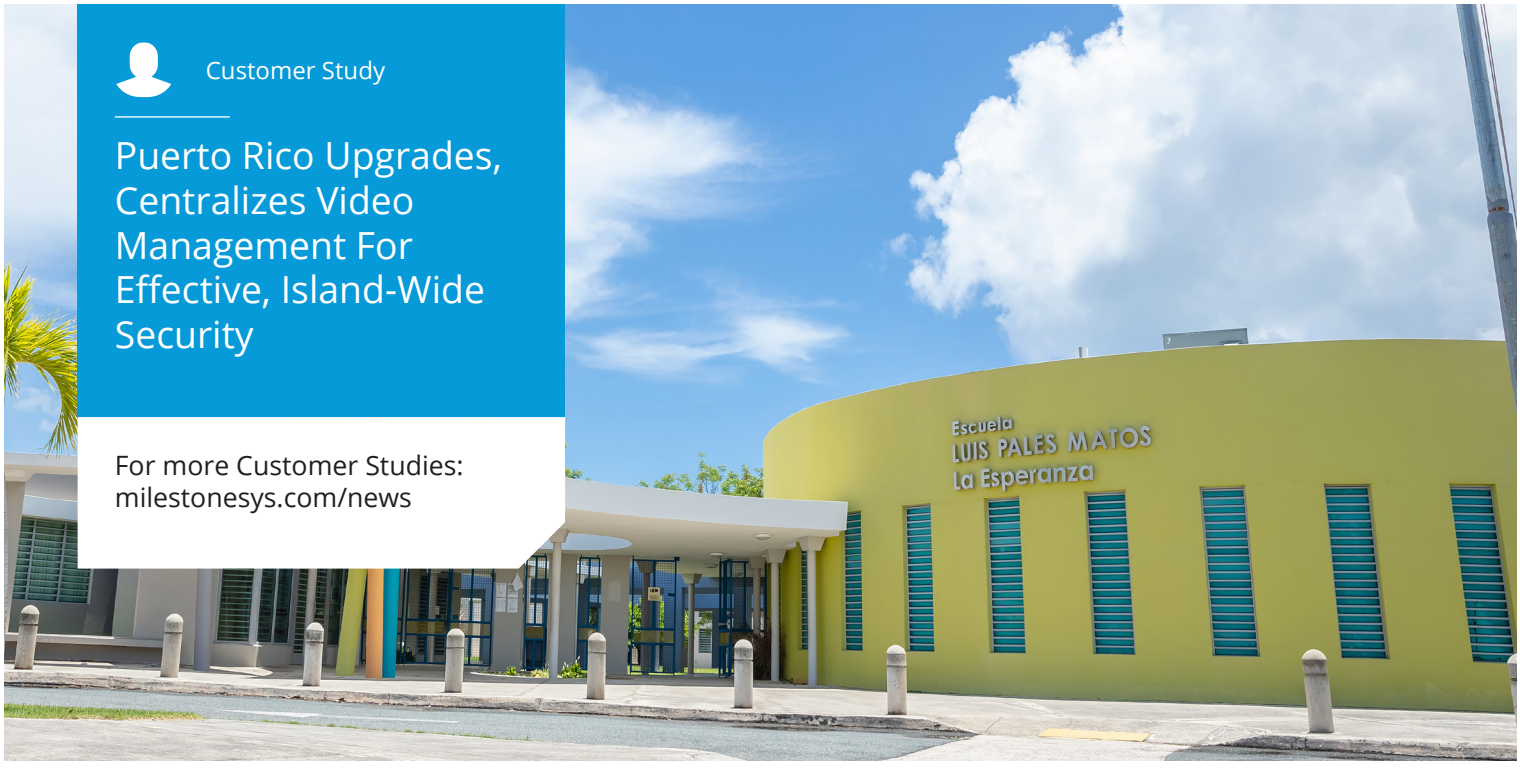


Puerto Rico Protects More Than 850 Public Schools With The Help Of Milestone Systems Software

THE CHALLENGE: The Commonwealth of Puerto Rico needed to implement a centralized and efficient perimeter security system for all public schools on the island. Intrusions and assaults at educational institutions have increased, and Hurricane Maria further exacerbated problems with the destruction of infrastructure.

THE SOLUTION: The need to repair hurricane damage also provided opportunities to invest in modern improvements. The Department of Education chose to install a video surveillance system with more than 10,000 cameras, speakers and other security devices in 856 schools. In the same way, a centralized control center was established using the Corporate version of Milestone Systems XProtect® video management software (VMS).

THE ADVANTAGES: Endowed with the same annual budget that allowed the monitoring of 250 institutions, the new system enabled the Puerto Rico Department of Education to cover all 856 public schools.

Since the system has been operational, there has been a 97% reduction in intrusions within educational institutions.

In addition to protecting the educational program, the audiovisual material captured by the system helps other government agencies to evaluate and manage areas for public use and investigate incidents.

Ensuring a safe environment is a growing challenge for schools and colleges today: theft, fights and bullying are some of the problems that not only affect students, but also teachers, employees and, ultimately, the government entities that subsidize the educational system.

July 2020

Organization
Puerto Rico Public Schools

Location
The Commonwealth of Puerto Rico

Industry Segment
Education, Community Safety

Solution
Milestone Systems:
- XProtect VMS Software
- XProtect Smart Client
- Milestone Interconnect

Cameras from:
- Axis Communications
- Uniview DH-Vision

Seneca Servers

Optex Sensors

milestone

In Puerto Rico, for example, the Department of Education was concerned about the increase in unauthorized intrusions, robberies and assaults within its schools. This index shot up after Hurricane Maria destroyed much of the island's infrastructure in 2017.

Even before this natural phenomenon, there was no centralized security system that integrated an overview of all schools. There were disparate installations of video surveillance equipment (cameras, alarms and lighting) but only in approximately 250 of the schools. After the hurricane, instead of investing in the repair and purchase of separate systems, top priority was given to providing perimeter security for all schools through an effective centralized command center.

"The hurricane damaged the island's communication and lighting systems, a circumstance that promoted intrusions into schools, and subsequently increased vandalism. We had no visibility of what was happening and we could not find a way to avoid these escalations," said César González Cordero, Security Commissioner for the Puerto Rico Department of Education. "However, we could not afford to buy and repair equipment individually for all schools, so a centralized and coordinated effort was necessary."

Based on this context, González said, the proposal was born to begin the process to acquire a video surveillance system for public schools in Puerto Rico, focused on perimeter security.

Perimeter Security For All Schools

Genesis Security Services, Inc. of Puerto Rico was selected to develop the perimeter security project for the 856 public schools on the island. This Puerto Rican corporation was founded in 1997 in Yabucoa, Puerto Rico by brothers Roberto and Emilio Morales, who are leaders in security services at the government level.

"We have been providing security to the Department of Education for more than 15 years through our onsite guard service. That is why we knew the design, location, assets and vulnerabilities of various educational establishments. This was a great advantage when executing the project," said Yasel Morales, Technology Director at Genesis.

"The system provides agility and precision. It is more efficient and immediate than communicating with a guard who has to enter a facility to verify what is happening.

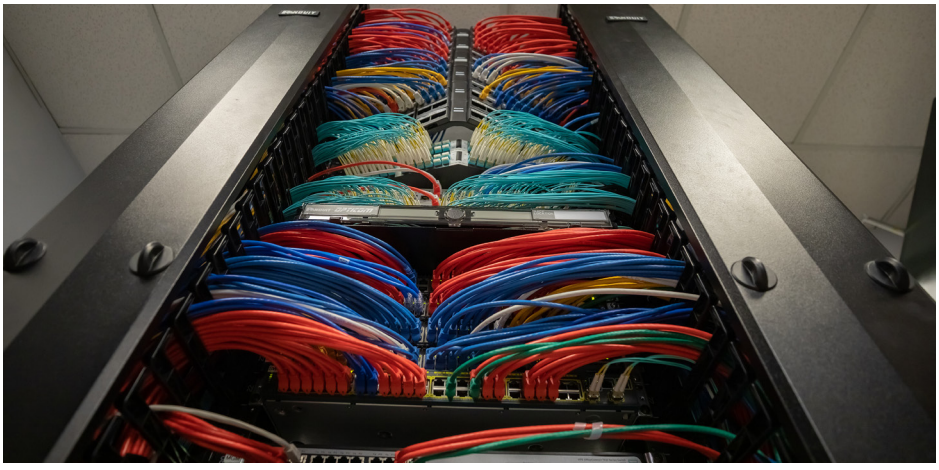
It's great working with a system that has visibility 24/7 in schools."

César González Cordero, Security Commissioner, Puerto Rico Department of Education

In October 2018, the installation of cameras and other devices began in all schools. The video system mission control was built inside the Genesis Central Station, located in the municipality of Carolina (in the northeast region of the island). Video data from all schools is returned to Central Station, where it is managed with the Milestone Systems XProtect Corporate open platform VMS.

Leveraging the power of the open platform, Milestone XProtect video management software supports more than 8,500 security and surveillance devices, and more than 450 software integrations from more than 3,500 technology partners. Alliance partners include providers of network video cameras, cloud solutions, DVRs and NVRs, servers and storage equipment, alarm and detection systems, video analytics, GPS technology, laser and radar scanners, boxes of emergency calls and more.

“At the Central Station we have fifteen workstations, with the same number of operators per shift. There we have a videowall of ten monitors distributed between the stations. Likewise, we have two dispatch centers that serve as backup: one in the municipality of Yauco and the other in the municipality of San Juan,” Morales explained.



As part of the project, approximately 10,000 Uniview DH-Vision 4-megapixel cameras were installed in 856 schools (an average of 12 cameras per campus). Audio speakers from Axis Communications and a range of Optex sensors also were integrated. The combination of these technologies made it possible for every school to have an anti-intrusions system with their own alerts feeding back to the Central Station.

Each campus has a Seneca brand server with the XProtect Express+ software installed. This communicates with the Corporate version at the Central Station through Milestone Interconnect™, a licensing platform that opens a communication channel between different hardware that normally cannot communicate with each other.

Milestone Interconnect connects remote sites for a low-cost video surveillance solution. It is the ideal surveillance for a wide variety of industries that want an inexpensive way to get centralized supervision of multiple locations spread across one region.

With Milestone Interconnect, engineers and managers can easily monitor critical and remote areas from one central location. This means faster intrusion management because operators in the central system can access the video and receive alarms from remote connected sites. This reduces the need to have local security personnel, maintenance, operation and other costs, including visits onsite.

The need to repair hurricane damage provided opportunities to invest in modern improvements.

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In the same way, a centralized control center was established using the Corporate version of Milestone Systems XProtect® video management software (VMS).

Genesis created virtual gates using cameras that, in addition to protecting school spaces, also ensure the safety of substations and solar panels, which are considered important assets for institutions. If someone crosses the virtual gate, an alert is generated locally and passed to the Central Station through Interconnect. Operators then make a visual confirmation and, if applicable, the emergency protocol is activated.

"The emergency protocol is to contact the Security Commissioner and the Department of Operations. For this liaison, we internally designate an inspector. Once informed, they activate the security officers at the sites, who are trained to give quick responses and inform the police," said Morales.

Thanks to the management software, Genesis can easily find any recording of the schools and send it to the Security Commissioner, who can also receive the alerts directly through an application on his mobile phone. It should be noted that all personnel handling the system, both operators and technicians, have Milestone Systems certifications, which they obtained on the manufacturer's website. Security Commissioner González explained that the directors and residents of the schools may contact the Central Station if they wish to report any suspicious activity within a school after regular hours.

González also clarified that "if for any reason a school principal requires a recording, he must contact us, and we request the information from the Genesis operations center. This protocol is designed to respect the right to be in a place without feeling guarded at all times, as stipulated in the public policy of Puerto Rico. In total, this system directly benefits almost 400,000 people."

Increased Security At A Lower Cost

According to the Security Commissioner, since the first camera was installed, they went from two or three intrusions per day to one or zero. Even in October 2018, they had no record of intrusions. Genesis Security Services, Inc. confirmed that since the system has been operational, there has been a 97% reduction in school intrusions.

Video technology has helped dispel problems such as theft of property by employees and, more importantly, has helped reduce rates of physical assault and bullying among students. These results have helped build trust among Puerto Rican families when they enroll their children in schools.

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Yasel Morales, Technology Director, Genesis Security

"The system provides agility and precision. It is more efficient and immediate than communicating with a guard who has to enter a facility to verify what is happening. It's great working with a system that has visibility 24/7 in schools," said González.

On the other hand, thanks to this project it was possible to reduce the cost of security in schools using technology, one of the main objectives of the Department of Education at the beginning.

"We spent about $25 million annually covering just 250 schools with the guard system, and we had almost 600 schools left unattended. This project gave us the possibility of covering 100% of the public schools in Puerto Rico with the same budget," González reported.

Finally, it is important to note that many of these schools are located in vulnerable places on the island, so the system is also helping the Police and the Prosecutor's Office to resolve cases that occurred around the educational facilities, and in general to contribute with the welfare of the community.

Future Projects

On behalf of the Department of Education, the Puerto Rican Government is seeking ways to integrate this type of video analytics system with software programs and databases of organizations who advocate for sexual assault victims.

"In the future we want to have a system that is capable of identifying if a sex offender crosses the perimeter in school zones so that we can warn in time," said González.

On the Genesis side, Morales said that the next step with this project will be to start developing video analytics for the VMS, not only to give perimeter security but also statistics such as counting people and vehicles. They also plan on integrating access control systems into all schools.

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César González Cordero, Security Commissioner, Puerto Rico Department of Education

About Milestone Systems

Milestone Systems is a leading provider of open platform video management software; technology that helps the world see how to ensure safety, protect assets and increase business efficiency. Milestone enables an open platform community that drives collaboration and innovation in the development and use of network video technology, with reliable and scalable solutions that are proven in more than 150,000 sites worldwide. Founded in 1998, Milestone is a stand-alone company in the Canon Group.

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