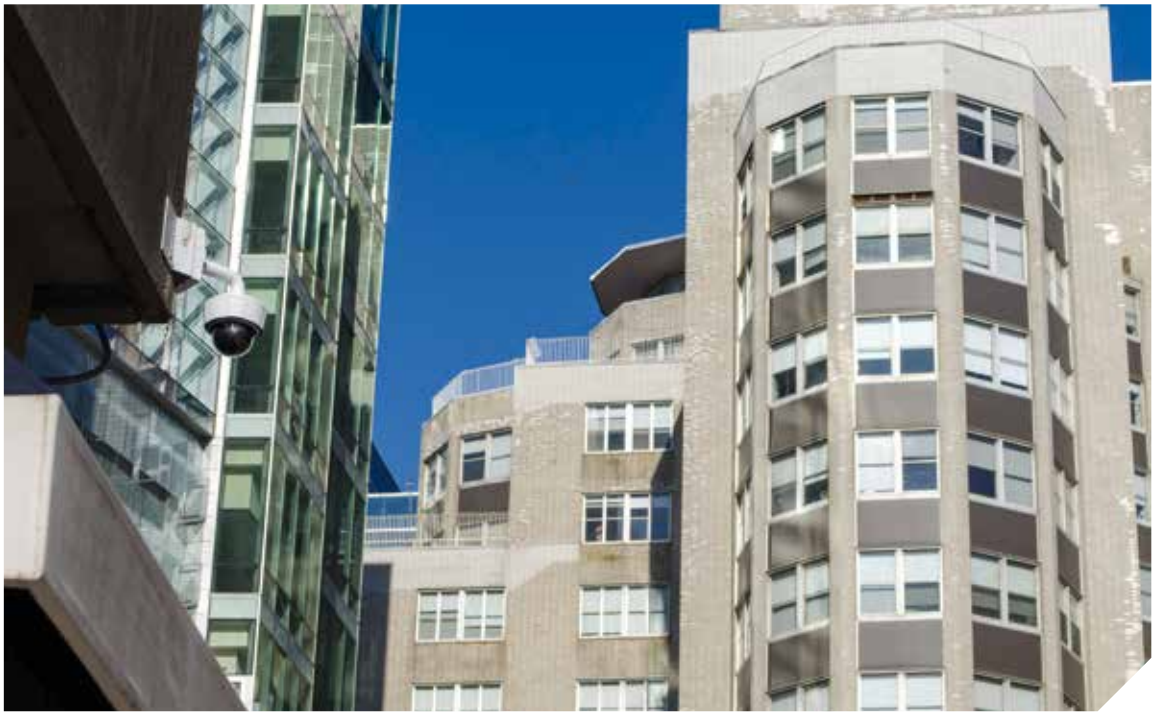
IP cures aging surveillance system with Axis video encoders.

Massachusetts General Hospital streamlines and expands video security system with cost-effective IP upgrade featuring Axis video encoders and Axis network cameras.



Organization:
Massachusetts General Hospital

Location:
Boston, MA, USA

Industry segment:
Healthcare

Application:
Loss prevention, safety and security

Axis partners:
Pasek Corporation, Milestone, Briefcam

Mission

Located in downtown Boston, Massachusetts, Massachusetts General Hospital (MGH) is one of the premier medical facilities in the United States. Its security team is responsible for the safety of over 40,000 people each day. To help support their security efforts, the hospital wanted to upgrade their aging analog security system to an IP-based infrastructure. However, replacing over 600 analog cameras at once was far too cost-prohibitive. MGH needed a solution that could prepare them for the future while maintaining their legacy investments.

Solution

Working with Boston-based system integrator and Axis partner Pasek Corporation, MGH decided to replace their DVRs with Axis video encoders. The encoders would network-enable the analog cameras and create an IP-based system on which the hospital could run an advanced Milestone XProtect® VMS, as well as analytics by Briefcam.

After upgrading with encoders, the hospital expanded their surveillance coverage by installing new Axis network cameras throughout their campuses.

Result

By upgrading to an IP-based system with Axis video encoders, the MGH security team gained increased flexibility in camera management. They are able to customize camera views on the fly and instantly call up video from anywhere on the network. They were also able to eliminate a large amount of equipment and greatly simplify the system's backbone. By further expanding coverage with Axis network cameras, MGH can now achieve high resolution video anywhere in its facilities. Because an IP-based system allows cameras to be added one at a time, the hospital can continue to add the latest security technology without overhauling its infrastructure.

AXIS COMMUNICATIONS

Securing a city within a city

Ranked as one of the premier hospitals in the United States, Massachusetts General Hospital is a world-renown medical facility that provides cutting-edge care in almost every medical discipline. Its reputation for quality and innovation draws patients, medical professionals, and researchers from all across the globe to the Greater Boston region. Robert Leahy, senior manager, systems and technology for MGH, estimates that upwards of 40,000 to 50,000 people can be onsite on any given day.

"It is a city," he said, and the hospital faces the same range of security challenges—from theft to car accidents to physical altercations. "MGH police and the security department have more licensed officers than my hometown. That's the scope of what we're dealing with. It's anything and everything."

To help keep patients safe in such a busy and sensitive environment, MGH security relies on the support of hundreds of analog surveillance cameras installed throughout its facilities. However, the complex DVR-based system was becoming outdated and unwieldy to manage. Operators had little flexibility to customize camera views and relied on paper lists in order to call up cameras. Searching through archived video could take hours, and the amount of DVRs, switches, servers and PCs that were required ate up valuable real estate.

Newer IP-based options offered ways to streamline camera management, reduce equipment and give the MGH security team more advanced features with greater control. However, replacing every camera and DVR was far too cost prohibitive. The hospital needed a solution that could bring their surveillance system into the future while protecting their legacy investments. After extensive research, Leahy decided to migrate to IP by replacing his DVRs with Axis video encoders. The encoders would provide an immediate upgrade by network-enabling his existing analog cameras and create a platform for future growth.

"We had over 600 cameras," Leahy said. "It would have been too costly to replace every one of those, but going the encoder route was such an easy deal."

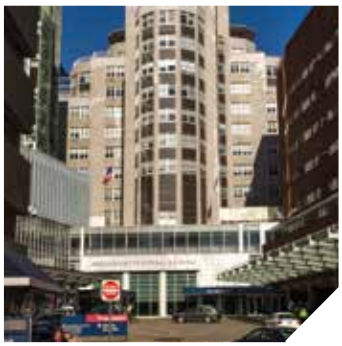
Encoders bring simplicity

Leahy enlisted Boston-based systems integrator and Axis partner Pasek Corporation to undertake the digital conversion. The project encompassed the entire MGH system, including the 999-bed main campus in downtown Boston, the research center at the Charlestown Navy Yard and satellite locations in the nearby cities of Chelsea, Revere and Danvers.

Pasek began by swapping out the DVRs for 16-channel AXIS P7210 Video Encoders. This greatly simplified the system's backbone. Before the upgrade, the 400+ cameras at the Boston campus ran through 25 six-inch tall DVRs mounted on four 84-inch tall racks. Switching routers directed the video from the DVRs to monitors for live viewing only on designated computers. The video was then sent to a separate server system for storage due to the risk of DVR hard drive failure.

After upgrading to IP, the two-inch Axis video encoders manage the same number of cameras at a third of the rack space. Furthermore, the encoders send the signal straight to a server running a Milestone XProtect® VMS. There, it can be accessed through the network by any approved device with the Milestone client.

"The amount of devices and power supplies they were connecting shrunk by 75%," said David Alessandrini, vice president of Pasek Corporation.



"The quality of video offered by the Axis IP cameras is so much different than analog. You are able to do a lot more with it. With analog cameras, if you wanted to use the video for identification, you had to focus it on a very small area. Now, with the 3 or 5 megapixel Axis cameras, you can capture a much larger area, and zoom into specific areas for forensic investigations without losing quality."

Robert Leahy, Senior Manager, Systems and Technology for Massachusetts General Hospital.

Saving time while saving lives

By running their system on the Milestone platform, the security team broke free of the previous limits on camera views. Whereas before, monitors were locked into pre-set camera groupings, the Milestone VMS can create custom groups on the fly. The IP upgrade also eliminated time-consuming procedures to call up cameras and search archived footage. Now, operators can pull feeds from anywhere on the network with a click of a mouse, and investigators can download video by simply entering the time and location desired.

The open nature of the IP solution lets the hospital install analytics such as the Briefcam video synopsis software to compress hours of video into just a few minutes. This will help the hospital conduct sophisticated analyses to improve both security and business operations. Leahy mentioned their parking managers are already excited for the information Briefcam will provide.

"There are so many different things we can do with the IP system," Leahy said. "It makes life so much easier."

IP upgrade opens new opportunities

Once the encoders were installed, MGH began adding new Axis network cameras directly to the hospital's existing IP network. Leahy standardized on the fixed tamper-resistant AXIS P3354 Network Cameras, which offer HDTV 720p quality resolution and P-Iris technology to optimize image quality, as well as AXIS P5534-E PTZ (pan/tilt/zoom) Dome Network Cameras for quick and responsive movement to target areas of concern in high definition.

Because he didn't need to install new cabling, Leahy could expand coverage quickly with little disruption to hospital operations and patient care. In fact, as the installation progressed, they found more and more places to add cameras.

"We have already gone beyond what we originally planned on doing," said Leahy. "It is so easy, and we put in new cameras all the time."

For example, the hospital installed cameras at the doors leading to their pediatric wing in order to capture video of each person who enters and exits, as recommended by the National Center for Missing & Exploited Children. They also installed cameras with IR illumination to monitor the medical irradiator room for sterilization of equipment and other activities, which is left in darkness when the devices are not being used.

Video surveillance is an increasingly critical component of hospital security, especially for an organization as large and multi-faceted as MGH. The adoption of a unified IP-based camera system will help them maintain consistent and quality video coverage to ensure the safety of patients, staff and visitors.

"We want our video to always be there and available, and we want the capacity to expand however we need," Leahy said.

MASSACHUSETTS GENERAL HOSPITAL

PASEK™
THE SECURITY COMPANY

milestone

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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.

For more information about Axis, please visit our website www.axis.com.

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