Protecting a cherished symbol of freedom with Axis.

U.S. National Park Service safeguards Statue of Liberty
with new digital surveillance system.

Organization:
National Park Service
(Statue of Liberty)

Location:
Liberty District, New York
and New Jersey, USA

Industry segment:
Government

Application:
Safety and security,
business operations

Axis partners:
Total Recall, Milestone,
BriefCam, Pivot3

Mission

After Hurricane Sandy struck Liberty and Ellis Islands in 2012, part of the eight-month restoration project included installing a new surveillance system to help U.S. Park Police (USPP) and the National Park Service (NPS) protect the millions of families who visit each year. The goal was to provide intelligent perimeter security for the islands, complete coverage for the entire interior of the statue, and enhanced coverage of the security screening facilities at the ferry landings in New York and New Jersey. The technology would help park personnel monitor visitor lines, assist ferry operations, and expedite responses to emergencies.

Solution

Total Recall Corporation, a video-centric security technology provider and Axis partner, designed, donated, and installed a cutting-edge security solution that included more than 160 megapixel and HDTV-quality fixed dome and pan/tilt/zoom (PTZ) network cameras from Axis controlled by a sophisticated Milestone XProtect® enterprise-class video management system (VMS) running on 11 Pivot3 vSTAC Watch converged storage and compute appliances.

Using a mix of fiber and wireless connections from Proxim Wireless and DragonWave, the new IP-based system would help the National Park Service cover areas of the islands that were previously unreachable with the old analog system.

Result

NPS is using Axis cameras and sophisticated search and viewing software from Milestone and BriefCam to provide critical situational awareness, help locate and reunite visitors who get separated from each other, verify claims of lost property, investigate construction mishaps, and reroute ferries to different docks in real-time to minimize landing backups. All video data is processed, stored, and protected on Pivot3 appliances so that NPS can access video in real time and into the future.

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Giving Liberty District a surveillance makeover

In October of 2012, the massive storm surge created by Hurricane Sandy destroyed most of the infrastructure on Liberty and Ellis Islands, as well as the security screening facilities at Battery Park and Liberty State Park. As the restoration and repair project got underway, Total Recall Corporation began deploying the all-digital, state-of-the-art network-based surveillance solution they designed and donated, with the latest technologies including an ultramodern, intelligent command center.

"Our goal was to provide the National Park Service and the U.S. Park Police with the tools to do their jobs more effectively and deliver a positive and memorable experience for the millions who visit the park each year," said Jordan Heilweil, President of Total Recall.

Using a mix of fiber and wireless connections, the new surveillance system was a complete overhaul and upgrade to the existing analog CCTV system. The new system now covers the entire perimeter of Liberty Island, the security screening facilities in Liberty State Park and Battery Park, and all 393 steps from the main lobby to Lady Liberty's crown. It even extends to areas of the islands that were previously unreachable thanks to wireless technology from Proxim Wireless and DragonWave.

"It's like comparing a new Porsche to an old VW Beetle," said Heilweil. "A digital system can do so much more. It's easier to use, and the image quality of the new cameras is like night and day compared to the old system."

In the command center, security staff are able to watch multiple camera streams simultaneously on a massive video wall. Using sophisticated BriefCam video software, they can quickly view hours of footage compressed into just a few minutes. In an emergency, the command center can also push live video to the mobile devices of security patrols and agency chiefs for up-to-the second situational awareness with the Milestone XProtect® video management software.

Seeing a national monument through fresh eyes

Total Recall drew on a broad portfolio of HDTV-quality Axis cameras to meet the specific environmental challenges of the Statue of Liberty and Ellis Island. For the interior, they chose the five megapixel, vandal-resistant AXIS P3367-V Fixed Dome Network Camera with P-Iris to provide better contrast, clarity, resolution, and depth of field. Total Recall selected its outdoor counterpart, the five megapixel AXIS P3367-VE Fixed Dome Network Camera, to monitor the exterior of Lady Liberty's pedestal.

For general monument coverage, Total Recall used AXIS P1346 Network Camera with a P-Iris lens. Outside the monument, where there is no light after visiting hours, Total Recall installed 720p HDTV vandal-resistant AXIS P3364-VE Fixed Dome Network Cameras with P-Iris and Lightfinder technology to capture full color image detail in virtual darkness (0.1 lux). For dark interiors such as emergency exit routes, they deployed the 720p AXIS P3364-V Fixed Dome Network Cameras, and for general perimeter coverage they selected 1080p HDTV, outdoor-ready AXIS Q6035-E PTZ Network Cameras.

Tracking a moving target

When the Statue of Liberty reopened on July 4, 2013, Liberty Island's main service dock was under repair, so the NPS had to reroute ferry traffic to a smaller shuttle dock and floating barge to accommodate the visitors coming from New Jersey and New York. Monitoring traffic with the camera system allowed the USPP to efficiently guide ferry service to avoid bottlenecks.

"With an integrated command center, it's almost like operating a flight control tower," said Norman. "A quick look at the video wall and I'm able to instantly see which dock is being under-utilized at any given time and redirect ferry operators on the spot to alleviate congestion."

The cameras help improve operations in a number of other ways, as well. When a passenger ferry crashed into a work dock, security was able to look at multiple views of the incident and ascertain when the boat lost power and got into trouble. When visitors put their belongings through the X-ray portals at security screening and later claim that something has gone missing, the cameras can verify whether they actually left the object behind. On one memorable occasion, a distraught woman told park rangers she had been searching for her husband for over two hours. Based on her description of her spouse, security used the cameras to track his whereabouts almost instantaneously and reunite the couple.

Fulfilling a security wish list

In the past, gaps in surveillance coverage were a constant struggle on Liberty and Ellis Islands. Today, with more than 160 network cameras placed strategically throughout Liberty District, those blind spots have all but been eliminated.

"It's an extremely impressive set up," said Heilweil. "Everything ties together seamlessly – the Milestone VMS allows security staff to leverage all the advanced capabilities of the Axis cameras, the BriefCam software helps security and law enforcement review hours of surveillance video in minutes, the massive HDTV-quality video wall displays multiple video streams simultaneously, and the ergonomic command center consoles allows operators to perform tasks efficiently even in high-stress situations."

> "With strategic placement of network cameras throughout the Liberty District, we're able to capture incidents from multiple angles simultaneously, which makes it easier to determine what happened and how it happened."

Captain Greg Norman, Commander of Liberty District for the National Park Service.

> "It's an extremely impressive set up. Everything ties together seamlessly."

Jordan Heilweil, President of Total Recall.

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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 its customers and carried 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 1,600 dedicated employees in more than 40 countries around the world, supported by a network of over 65,000 partners across 179 countries. Founded in 1984, Axis is a Sweden-based company listed on NASDAQ OMX Stockholm under the ticker AXIS.

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