Synectics protects Islamic treasures

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General Manager of SIS

Designed by one of the 20th century’s most successful architects, the new Museum of Islamic Art in Doha represents the first of its kind in the Gulf and will become the center of excellence for Islamic culture. As part of the multi-million pound construction, the 45,000m² museum features the latest in high-end security and surveillance, the keystone of which is a comprehensive Synectics CCTV command, control, and digital recording system.

The challenge
Located on the edge of Doha harbor, the magnificent structure occupies an artificial island 60m from the coast. The complex features a study, library, several restaurants, and education and presentation areas, in addition to vast exhibition galleries.

The unique architecture and location of the new museum are hailed as a catalyst for the future development of the Doha area as a cultural and educational center of excellence in the Middle East. Showcasing its extensive store of treasures from across the Islamic world, it forms a centerpiece of Qatar’s strategy to become a tourist destination of choice. Future plans will see the Museum of Islamic Art forming a partnership with four other national museums, scheduled to be built in the Doha harbor area over the coming years, to establish a comprehensive and diverse cultural and educational center.
Each museum in the Qatar area must adhere to the code of practice of the Qatar Museums Authority, who has outlined a security blueprint for all new museums in the area. To achieve this required standard, the museum’s management turned to experienced installer SIS Security. Bruce Haigh, General Manager of SIS, takes up the story: “In implementing the comprehensive security plan for the Museum of Islamic Art, it was vital to find a balance between the need to ensure the security of the important artifacts on display, the safety of staff and visitors, and the requirement for the museum to remain a readily accessible education center.

“To achieve this required standard, and the demands of product integration at the site, we wanted to specify a flexible and high-performance control solution that would be capable of integrating hardware from a number of manufacturers, and present them in a single, integrated point-of-control for the operators.

“After extensive product comparisons, we recommended the use of the Synectics Synergy command and control platform, in combination with a Synectics Digital Recording solution.”

The solution
Operators now view and control over 430 cameras covering all aspects of the facility via the intuitive Synergy interface, affording them a single route to all common system functions. From the purpose-built, on-site control room, the security team can monitor high-resolution images from all internal and external aspects of the museum.

This comprehensive surveillance coverage allows operators to virtually patrol the galleries of the museum, instantly alerting the manned-guard security team to any incident via the associated radio link. Should the need arise to track individuals through the gallery network, operators can switch cameras via specially constructed maps of the museum displayed on the Synergy interface. Visually displaying the locations of all cameras, operators can switch cameras simply by touching them on-screen. This allows for intuitive tracking of individuals throughout the museum, contributing to an economical operator workload and overall effectiveness of the museum security network.

Artifacts displayed in the museum’s diverse galleries are secured via an RFID tagging system; this means any movement of an artifact triggers an automatic response via the Synergy system, automatically switching to the camera nearest to the incident and capturing any subsequent movements. Synergy also displays any associated incident-triggered images on the control room video wall.

Using ‘black wall’ technology, Synergy makes intuitive decisions based on the alarm inputs it receives from third party interfaces (e.g. from an access control system), and displays only the cameras that need operator attention. This allows for a fully streamlined control facility and an automatically prioritized operator response.

The ‘black wall’ technology provides visual confirmation of any activated alarms around the museum, providing instant confirmation of any potential incident, from an open fire door to a threat to the museum’s precious exhibits, allowing security staff to initiate a direct and managed response to all eventualities.

Supported by manned guarding tours, control room staff enjoy equally comprehensive coverage of the exterior of the building. Here Synergy alerts operators to any suspect movements that occur within a specified distance from the museum’s waterside, via integration with the facility’s radar tracking system.

Designed to provide automatic perimeter security for large industrial sites, and other high-value installations, the system uses a networked array of overlapping security radar. Its seamless incorporation into the Synergy interface means targets can be tracked and viewed without any user interaction, alerting operators to a situation via the control room’s video wall, displaying and tracking any potential threat, and, again, allowing the correct level of response to be deployed.
Access to the museum is controlled via a comprehensive access control system. Integrated into the Synergy system, full access details from any of the 30 intercom-controlled doors and 114 card access points are stored along with the accompanying visual camera footage. Here, a comprehensive surveillance network is critical in order to verify this information. Invaluable in any retrospective investigation, it shows instantly who entered the museum and when. Time-stamped footage is available to confirm any pedestrian traffic, from any time period, at the touch of a button via the Synectics solution.

Recorded on-site via 90 terabytes of Synectics Primary Storage Node (PSN) storage, footage for retrospective investigation can be instantly recalled at the touch of a button from any of the Synergy workstations. Any visual information required for off-site investigation can be downloaded to digital media such as DVD. Including all supportive data, and encrypted using the latest MD5 hashing code to ensure its integrity, this footage is also admissible should any future prosecution be necessary.

This comprehensive security network backed by Synectics technology not only fulfills the stringent criteria specified by the Qatar Museums Authority, but is also reflected at their headquarters, where another Synergy position is connected via an IP network. As the planned additions to the network of museums are built, each of their control rooms will be connected to the Qatar Museums Authority’s headquarters. These additions will see Synectics technology used as a keystone of a security network deployed to protect some of the world’s most valuable and important treasures, and for many years to come.