**Lexington School District One,
South Carolina**

MOBOTIX

C A S E   S T U D Y

The Challenge: How To Enhance Campus Security Cost-Efficiently

Lexington School District One serves more than 24,000 students from pre-kindergarten to grade 12. With more than 3,550 employees, the district occupies 48 percent of the Lexington County's 750 square miles and is one of the county's major employers. During the past 10 years, Lexington One has grown by an average of 513 new students per year, and the district remains one of the fastest-growing school districts in South Carolina. To keep up with growth, Lexington One has built 10 new schools since 2003.

Lexington One prides itself on the innovative use of technology and has built a substantial network back-end support infrastructure for student use. The school district has nearly 16,000 iPads. Every student in grades 6 through 12 carry the tablet devices, which provide access to the most current information available through the Internet and to the district's Learning Management System 24 hours per day, seven days a week.

"Our district benefits from a visionary superintendent who sees technology as key to student learning," said Allen

Ray, Network Services Coordinator, Lexington One. "And that vision goes far beyond learning and into the very core of our IT department and our security program."
The Challenge: How to Enhance Campus Security Cost-Efficiently

Lexington One, working with long-time systems integrator partner CMI Networks, needed to upgrade to higher resolution video surveillance cameras and move away from legacy equipment reaching end-of-life. Given the school's preference for the latest technology, security and IT personnel sought out an innovative platform to enhance the protection of its district.

Being used as an investigative tool the advanced video surveillance system was expected to gather more details relating to incidents. More importantly, Lexington One sought an IP camera system that serves as an active deterrent while avoiding the look of a secured campus and that enables a fast investigation and quick response in case of an incident.

Security-Vision-Systems

MOBOTIX.com

D15

The Solution: A Decentralized IP-Video Surveillance System With CPTED Features

M25

Though looking for the latest technology Lexington One had to asses the cost of installation and the total cost of ownership as well. "We sought a surveillance solution that could take advantage of our current infrastructure while increasing camera coverage by 40 to 50 percent," said Ray.

After closely evaluating the district's requirements and infrastructure, CMI Networks recommended the IP-video surveillance system to serve as an active deterrent, using the Crime-Prevention-Through-Environmental-Design (CPTED) principles built into the system for the growing school district. The MOBOTIX solution could deliver high resolution live and recorded video with audio capabilities, event logic and IP notification.

"Integration with audio was essential. We found surveillance to be a significant deterrent when combined with audio recording and 2-way-communication. With the MOBOTIX solution, we are able to gather details relating to incidents with high-resolution video and crisp audio, and determine the outcome quickly", Ray said.

Following the successful evaluation of the solutions, Lexington One deployed a total of 1,200 cameras including Q25, D15, D25 and M25 models. CMI Networks leveraged cameras from MOBOTIX with built-in hemispheric and dual-lens technology to drastically reduce the required

number of cameras thus maintaining the open environment of the campus.

The 5-megapixel IP camera models deliver high-contrast images without motion blur by leveraging superior image sensors and pioneered MxLEO, Light Enhancement Optimization, software which is processed within the camera, even in poorly illuminated environments. The cameras are more light-sensitive and capture twice as many pixels as Full HD.

The D25 is a compact dome camera designed for indoor and outdoor use that can also be equipped with vandalism protection; while the M25 is a compact, cost-efficient all-around camera with multiple lens options. The D15 is a weatherproof, robust dual camera with interchangeable sensor module, and the hemispheric Q25 delivers 180-degree panorama images, using a single camera to secure an entire room with no blind spots for a better overview than several individual cameras. It offers a digital continuous pan, tilt, zoom functionality. Unlike conventional PTZ cameras the robust Q25 has no moving parts and is thus regarded maintenance-free.
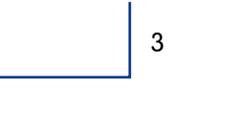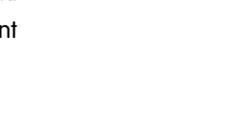
All cameras are based on the decentralized concept, with data processing taking place within the camera and recording taking place internally on an SD card, externally on a USB stick, or via the IP network on NAS hard drives.
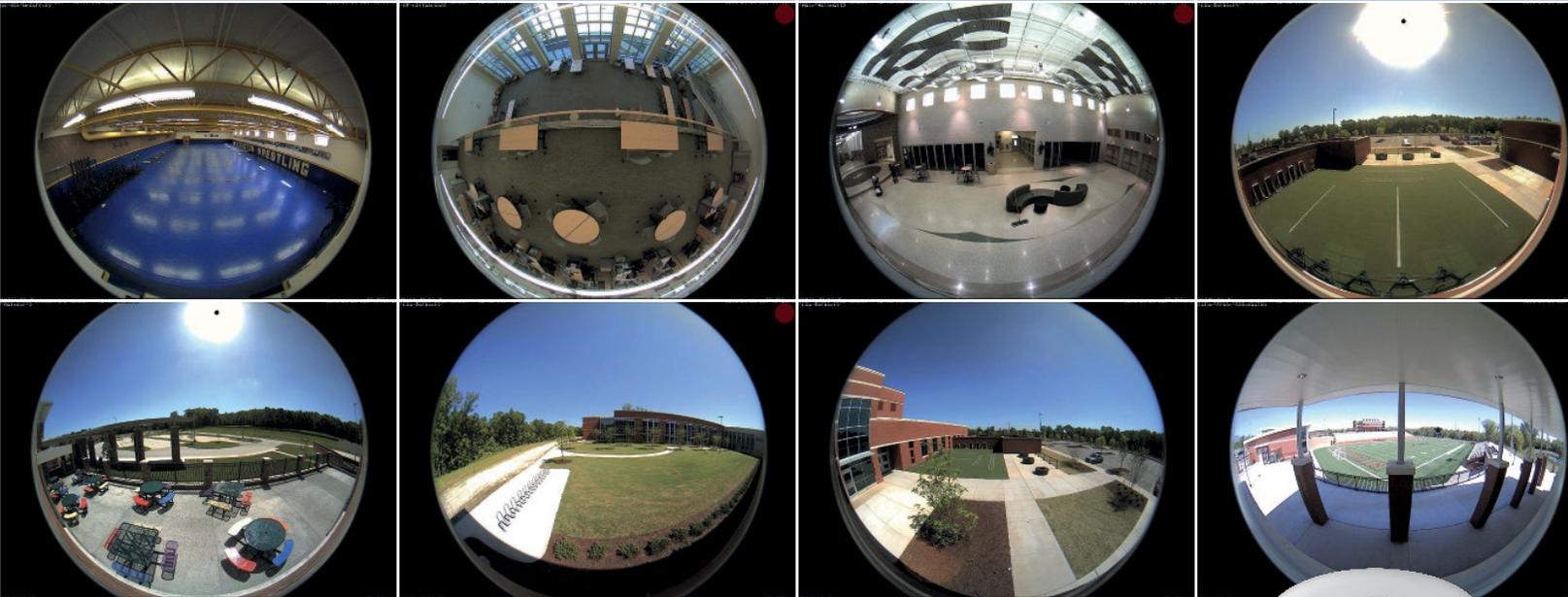
Q25

Pioneered by MOBOTIX the decentralized system approach reduces the traffic across the network significantly and thus takes the burden of a conventional video surveillance system forcing expensive upgrades of the IT infrastructure.

The MxControlCenter software serves as the district-wide video management system, while QNAP NAS servers provide 12-48 terabytes of storage per school. Administrators, local police and school resource officers are trained to use the surveillance system and to export video evidence if needed. "With MOBOTIX, configuration is everything, and the vendor support and from CMI has been critical to the success of the installation," Ray said.

Results

"The process of securing a campus environment is challenging, but schools can benefit greatly from the efficiencies provided by IP-based surveillance," said Jason Walker, Business Development Manager, CMI Networks. "The solution delivered to Lexington is a perfect example of how innovative use of high-resolution, networked surveillance can provide higher video quality, lower upfront costs and operating expenses, faster investigations and, most importantly, a safe environment parents can be happy to send their children to."

"The school system realized significant security benefits and cost savings by choosing the MOBOTIX solution — delivered by reducing the camera count by 40-50%, an extremely low power consumption compared to other vendors as well as the reduced bandwidth requirements," Walker said. „The decentralized system with data processing and recording taking place within the camera makes it possible to use up to 10 times more cameras

per server, compared to central VMS-based recording typical of competitors. These benefits will continue to be realized as Lexington One expands the system", underlines Walker.

The solution, which was deployed in July 2014 in a four-phase project plan, is completely scalable and, therefore, can grow as the school expands. For example, a new school will open in August 2014 and will be equipped with the same MOBOTIX technologies as other locations. All users at Lexington One find the system to be reliable, effective in investigations and efficient when accessing video data. Most importantly, the system provides superior protection of the school district's property, assets and resources, and ensures the safety of its most significant assets, their students and staff members.

"We are very happy with our decision to implement MOBOTIX with the help of CMI. The cameras serve as a deterrent to reduce the likelihood of any problems, and they better provide evidence of what's happening, especially with the audio capability," Ray said. "If there is an incident, we can easily pull the video files and quickly make a determination on what our response should be. In today's education environment, the ability to quickly determine what is happening at any given moment is invaluable."

D25

T25

S15

M15   D15   M25   D25   Q25

MOBOTIX – Made in Germany:
Innovative Technology, Reduced Total Costs

The German company MOBOTIX AG is known as the leading pioneer in network camera technology since its founding in 1999, and its decentralized concept has made high-resolution video systems cost-efficient.

Increased Resolution Reduces Amount Of Cameras Needed
1536-line, high-resolution sensors give a better overview and allow users to monitor an entire room with just one camera.

Reduced Installation Costs At Any Distance
Standard Ethernet connection enables the use of common network components such as fiber, copper and wireless (wi-fi).

Intelligent Cameras Reduce The Number Of Recording Devices
The decentralized MOBOTIX concept makes it possible to store data from approximately ten times more cameras to a single storage device than is normally possible.

Event-Controlled Image Format Minimizes Storage Costs
Automatic image adjustment (frame rate, size) based on movement, sound or signal input reduces the bandwidth and storage requirements.

Low Power Costs, No Extra Heating
Anti-fogging without heating allows usage of standard PoE technology to power the system via Ethernet or two-wire cable, saving power cabling costs.

Backup Power Supply Costs Reduced By Over 80 Percent
Low power consumption, approximately four watts, enables year-round PoE (no heating required) with one centralized UPS from installation room using the network cabling.

Robust And Practically Maintenance-Free
Fiberglass-reinforced composite housing with built-in cable protection and no mechanical moving parts (no auto iris) guarantees longevity.

Software For Thousands Of Cameras And Storage Devices Included
The right premium user interface software for every application: MxEasy for compact video solutions, MxControlCenter for professional control centers.

Unlimited Scalability And High Return On Investment
While in use, more cameras and storage can be added at any time; image format, frame rate & recording parameters are camera specific.

Additional Functions And Other Extras Included
Audio support, lens, wall mount and weatherproof housing (-30 to +60 °C; -22 to +140 °F) are included; microphone & speaker available in almost all models.

MOBOTIX CORP
80 Broad Street, Suite 702
New York, NY 10004 United States
Phone: 888-MOBOTIX (662 6849)
Fax: +1 212 385 6129
E-mail: us-sales@mobotix.com
www.mobotix.com

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