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Kingston-Frontenac Library, Ontario (Canada)

High-Resolution Security for over 60,000 square feet of Books

The 16-branch Kingston-Frontenac Public Library is a primary information and community source for Kingston, Ontario, and the rest of Frontenac County. The library's branches expand beyond book borrowing to provide citizens with computer, Internet, printing and copying access, as well as genealogy services and book clubs, making it a community hotspot for leisurely activity and a gateway to knowledge.

Most of the library's locations are small 400- to 500-square-foot buildings in rural areas, but the library also operates several urban branches. In fact, its Central Branch boasts 60,000 square feet of books, computers and other learning collateral. The library's branches span the entire county, and more than an hour-long drive separates some locations.

Challenge

The small, rural branches of the Kingston-Frontenac library are relatively quiet, even on the library decibel scale, but the urban branches, particularly its Central and Isabel Turner branches, are different animals. The Central Branch's 60,000 square feet make complete surveillance coverage difficult, especially for the budget-conscious library. The urban settings of the two branches attract a variety of patrons that include students, children, job hunters and even visitors who are just looking to beat the winter snow for a couple of hours.

These particular branches suffered from minor theft, vandalism and occasional inappropriate behavior from patrons. Their surveillance system at the time failed to provide the critical data needed to make identifications. The bulky analog cameras may have served as a deterrent, but the system was unable to provide the image clarity the library needed.

"We had incidents where our cameras caught the perpetrator walking out with stolen material, but there was nothing we could do about it," said Doug Brown, Director of Facilities and Projects, Kingston-Frontenac Library. "The images were too blurry for the police to make any identifications during their investigation, and we suffered from the consequences of outdated technology. In addition, the cameras were so unreliable that we would have to check them every morning to make sure they were all running because they were prone to failure. Sometimes there would be an incident and we went back to review the footage, only to realize the camera had gone down and we had nothing. If you don't get an image clear enough or don't get an image at all, as we were, you are kind of defeating the purpose of the system."

The Central Branch also showcases a rare book collection that was recently appraised at a high dollar amount. The library knew it would have to upgrade its surveillance to truly protect its investment, as well as ensure the safety of patrons and employees, prevent theft, and investigate incidents after the fact. However, the Kingston-Frontenac Library couldn't find the room in their budget to revamp security technologies. That is, until a sharp, MOBOTIX-armed security systems integrator entered the fray with a proposal to slowly install the surveillance solution over several years to spread out the cost.

One MOBOTIX camera records 30 times more detail than traditional CCTV cameras

"Being a municipal government entity, the library was very cognizant of finances," said Don O'Connor, General Manager, Building Technologies. "I took the time to review their annual statements online so I could get an idea of what their budget was and proposed installing the cameras little by little so it didn't need to be in the budget all at once."

Solution

O'Connor's proposed solution quickly appeared to be an attractive option. O'Connor arranged a "Lunch and Learn," where he demoed the MOBOTIX Q24, a discreet camera that leverages hemispheric technology to provide a complete 360-degree view that rivals the coverage area of three to six traditional cameras. The unmatched, high-resolution coverage drastically reduces camera counts and, therefore, minimizes system cost.

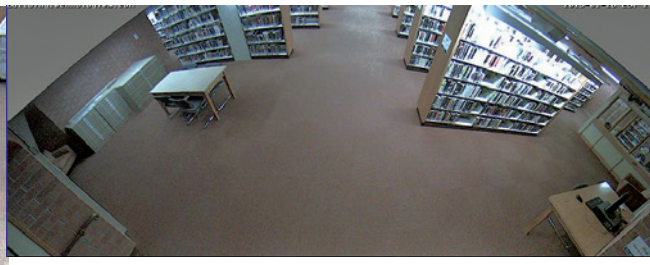
O'Connor installed one Q24 camera as a pilot project to give the library a better idea of the technology's capabilities. O'Connor placed the camera in the Central Branch's most difficult location, its main entrance, where previous cameras failed to identify thieves and vandals. One MOBOTIX camera with 3.1 megapixels records 30 times more detail than traditional CCTV cameras and enabled the library to exceed the required image clarity.

"The test was a monumental success," O'Connor said. "The single camera could see everything at the front door area, and the high-resolution images made identification easy."

The library was equally impressed with MxControlCenter, professional video management software included with the purchase of every MOBOTIX camera at no additional cost. MxControlCenter features all components of robust video management software, including a user-friendly interface and camera display, convenient video search, practical alarm handling, automatic camera integration, video storage on file servers and a useful configuration and update assistant. The free software delivered additional savings to the library, which quickly decided to expand upon the MOBOTIX solution.

"There are so many bells and whistles with MxControlCenter, but it's not difficult to become proficient with," Brown said. "It's exceptionally intuitive, and it delivers a lot more functionality and benefits than what we have been previously using."

The library found additional value and cost savings with MOBOTIX solutions because of the company's decentralized approach to surveillance. Each MOBOTIX camera is equipped with a high-speed computer that drastically reduces



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network bandwidth because video is processed on the cameras themselves and is not continuously transferred. The decentralized concept also allows the Kingston-Frontenac Library to save additional money by eliminating the need for external storage appliances.

The Kingston-Frontenac Library has now installed six cameras: four in the Central Branch and two at Isabel Turner. The Central Branch now leverages the high-resolution images of the MOBOTIX Q24 camera to also secure its computer area and survey its rare book collection. The Isabel Turner branch now utilizes a Q24 to monitor its entire entrance area, while a single D14 camera covers the entire front desk area and safeguards the branch's computers. The MOBOTIX D14 DualDome camera is a dual-lens camera capable of securing two separate areas with a 6.2-megapixel potential.

Results

O'Connor said he gets a call from the library every few months, asking him to replace another analog camera with a MOBOTIX camera. The organization is slowly upgrading the surveillance solution until, one day, all the branches are fully covered by MOBOTIX. The process is going smoothly, and phasing out the analog system is easier than expected. The Q24s exceptionally wide, 360-degree view enables O'Connor to replace the analog cameras three or four at a time while installing just one Q24 — achieving even greater surveillance coverage than before.

"The 360-degree views give us a chance to hone-in on key areas of the library without having to install a bunch of cameras," Brown said. "Building Technologies and MOBOTIX gave us a solution that not only saved us a significant amount of money, but is also robust, easy-to-use and incredibly reliable."

The network of MOBOTIX cameras is also greatly appreciated by the police department, which is enjoying streamlined investigations at the library locations. The enhanced resolution has helped the police make identifications that led to arrests for assault and theft.

"The MOBOTIX cameras continue to prove to me how robust they are on a daily basis. And, since we continue to install the cameras, I am constantly reminded of their cost-effectiveness," Brown said. "That is a glorious combination."

MOBOTIX has developed and manufactured IP video systems, video management and analysis software in Germany since 2000.

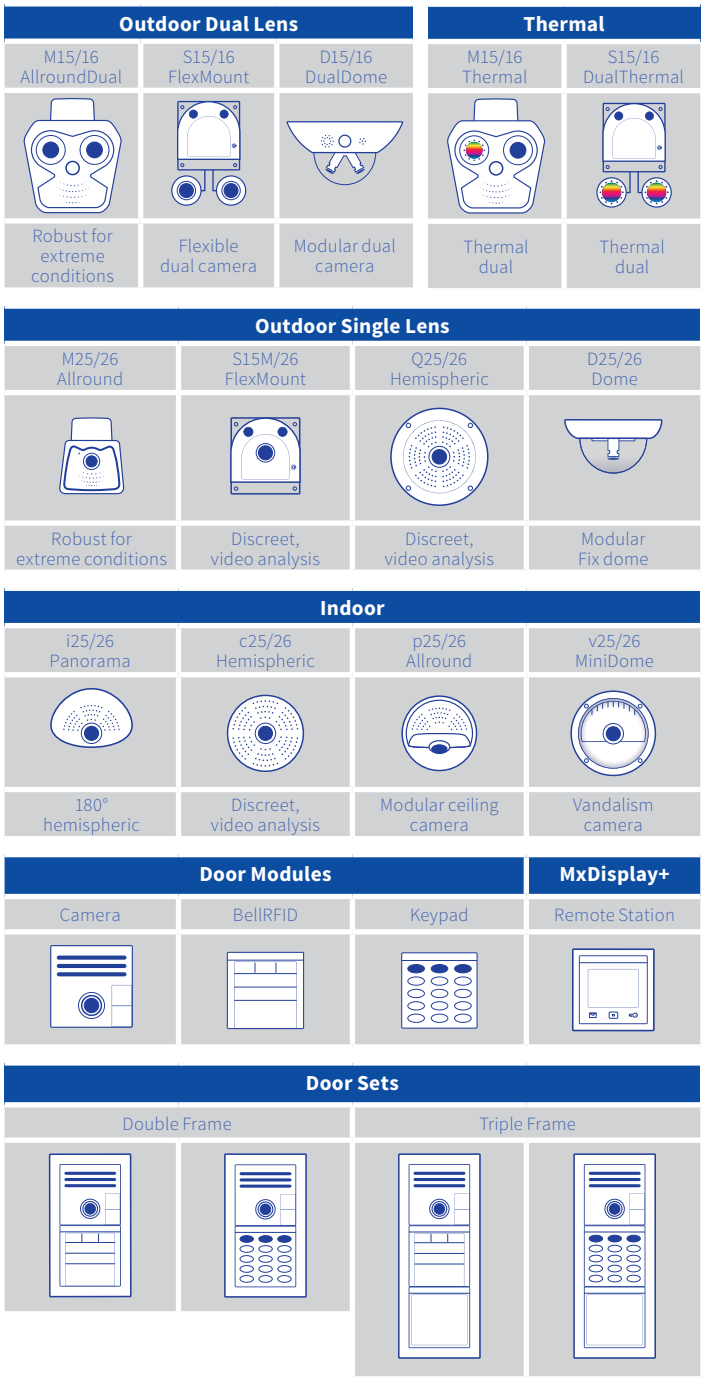
MOBOTIX stands out for its **high level of reliability**. All outdoor cameras are subjected to a stress test for temperatures between -30°C and +60°C (-22°F and +140°F). Without additional components, without heating or cooling and with no moving parts (for example auto iris), they are virtually maintenance free.

MOBOTIX delivers a **perfectly matched package**, starting with the microSD card for storage management and HD audio (microphone and speaker) with VoIP telephony through video analysis, a professional video management system and motion detection software reducing false alarms.

The **decentralized architecture** means that a central computer is not required and the network load is minimal. The intelligent cameras from MOBOTIX process and store image data themselves, trigger events and, in the event of remote access, manage the frame rate and resolution depending on the available bandwidth.

The **6MP Moonlight sensors** and complementary **thermal imaging technology** ensure reliable detection of moving objects, even under the most challenging light conditions and over long distances. As a result, it is possible to cover large areas with just a few cameras. Less power cabling, less IT infrastructure and fewer additional light sources are needed. MOBOTIX cameras are powered using standard PoE and do not require more than 4-5 watts.

An intelligent IP video system from MOBOTIX allows you to **reduce total costs**. The investment pays for itself after a short time and the free-of-charge software and updates ensure it is a future-proof investment.



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