



# MAYFAIR MALL

## splurges on IP



**System designed to deliver more than just security**

**By Kathleen Sibley**

**M**any organizations have started dipping their toes into IP-based security systems, often ending up with hybrid digital and analogue setups.

Mayfair Shopping Centre, perched on the outer edge of downtown Victoria, however, has dived into the deep end, so to speak, with a \$400,000, 100-per-cent IP camera installation built on a \$170,000 state-of-the-art network that has become a showpiece for its parent company, Ivanhoe Cambridge Inc., and a springboard to a world of future possibilities.

According to IndigoVision, the mall is the first in Canada to deploy an entirely IP camera security system.

The system comprises 26 PTZ and 67 Power-over-Ethernet fixed IndigoVision cameras that provide surveillance for the public areas inside the 120-store mall and the parking lots and surrounding areas covering a total of about 550,000 sq.ft. It was designed and installed by the Victoria-based IndigoVision partner Laser Star Systems Ltd. and Hoffman & Company Security Management Consultants Inc.

IndigoVision's custom-built iSCSI server provides 26TB of RAID 6 storage to maintain 30 days of continuously recorded video streams, which use the vendor's Windows Network Video Recorder software.

Compression technology, along with Activity Controlled Framerate, reduces the storage requirement by streaming inactive scenes at a lower frame rate and ramping up to the maximum frame rate when motion is detected.

The CCTV-camera implementation serves all the typical security purposes you'd expect — easy access to recordings, of incidents for example, such as slips and falls, vandalism, theft and other criminal behaviour. But the network infrastructure design provides equal, if not greater, value.

In fact, says Barry Greening, Mayfair's operations manager, the system is so robust and scalable that it could virtually run the entire City of Victoria's infrastructure.

"I'm using only one multimode strand of fibre, and that is nowhere near (exhausting) its capability," he says.

That design — which accommodated the consolidation of IT projects, security, building automation (HVAC), voice over IP and mall services such as wireless Internet access, interactive directional signage, portable kiosks and wireless gift card scanners — went a long way towards achieving the necessary buy-in for the project.

In planning for about a year, the project took place from July to September 2009. At the time, mall owners were looking at a camera system of some sort and were considering an analogue, standalone camera system because it would have cost less, Greening says. But several other projects requiring connectivity were also slated for the same time, and owners realized that, by integrating all those projects, both wired and wireless, onto the same network, without having to pull additional cable (and conduit) to different locations, an IP-based system was the more cost-effective option.

“I had this perfect storm,” Greening says. “I had the need, I had the budget and the people in place willing to work with each other ... and my contractors played a critical role in this.”

Roberto Winter, general manager at Laser Star Systems, explains that he succeeded in winning the project by demonstrating the value of focusing on the network to provide business value to the entire organization, not just to security.

“I sat down with the management company, and I was able to clarify to non-IT people that security isn’t that much of an issue when you know how to manage a network,” he says. “I made sure there is enough bandwidth for our portion and that it’s a completely separate area that nobody else has access to. They were willing to listen and invest into that, and now they’re seeing the returns on that investment.”

Prior to the installation, the mall relied on 24x7, manned security. And while the number of security staff and hours haven’t decreased, Greening hasn’t had to increase staff either.

“I can leverage the camera system more; it has allowed me to keep hours at current levels longer,” he explains.

Now, live and recorded video can be monitored and analyzed at a single, four-monitor workstation that runs IndigoVision’s security management software.

That came in handy when someone — who has not yet been caught — stole a PTZ camera shortly after the system was installed,



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although the camera is useless without the custom recording software, notes Winter.

Local police have also used the system for their own investigations, although, says Santo Polito, manager of property services at Ivanhoe Cambridge, “We didn’t install it to turn it into a satellite police station. The side effect is that once police hear about it they will be asking for more and more evidence. And they are welcome to come in and take a look, but, naturally, they have to follow a protocol.”

Terry Hoffman, a security consultant engineer at Hoffman & Co. who was contracted for the project by Paragon Security, notes that malls pose unique requirements for surveillance systems.

“The mall system should be able to follow someone who comes in an entrance and tell the story of how that person moves through the mall,” he says.

In addition, malls typically have a multitude of ceiling profiles, tenant facades that can’t be installed on and spaces that can’t be installed in.

“You have to go through certain permissions, and you face the risk that if tenants do renovations, your system could be knocked down.”

While each of the 20 properties his firm has consulted on in the last three years is unique, Mayfair’s is a model Hoffman expects will be replicated.

“There is no doubt this is a future model going forward,” he notes. “Some of the properties we are doing now, we are making sure we have a fibre backbone throughout the mall that is used just for security.”

In the future, Greening expects to port more of the building automation system to the new network, as well as to implement RFID tracking. RFID tracking wouldn’t be cheap, he admits, but it would provide the ability to follow virtually anything, including equipment, people and merchandise, around the mall.

“I’m interested in following people for liability purposes, particularly my security and my cleaners, to show good due diligence,” Greening says. “Or I could sell a service that provides loss prevention to stores with their existing RFID chips.”

Another possibility is the development of a customer counting product, which would provide the mall with useful customer metrics.

“The big opportunity is the future,” he says. “It’s now so cost-effective for me to bolt anything on that it’s mind-blowing.”

The challenge, says Polito, is that although the manufacturer will often offer a feature such as customer counting, the feature would still have to be tailored to the mall’s needs, which would require an additional investment in software development.

“We need a weekly report, broken down by the half-hour or 15-minute interval, which will tell us exactly how many people came at that time,” he says. “A lot of features are there, but the manufacturers haven’t developed the software to support them in particular contexts.” ©

*Kathleen Sibley is a Toronto-based freelance writer.*

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