Taking a Byte out of Memory

By Diane Ritchey, Editor

Storage is more than a place. Today, enterprise security leaders seek solutions for their specific needs that go beyond just a lot of hardware-based memory.

For Gary Adkins, assistant vice president of security at Sotheby's art auction house in New York, ensuring that every event is recorded could be worth millions of dollars. Sotheby's is a global company that engages in art auction, private sales and art-related financing activities. It operates in 40 countries, with principal salesrooms located in New York, London, Hong Kong and Paris.

"We're dealing with artwork worth millions of dollars on a daily basis," Adkins says. "We are constantly challenged from a risk management position – we cannot have any damage to our artwork. But if it does happen, it's better that we find out right away. Yet sometimes it does not and that's where it is important we have video stored weeks, even a month out."

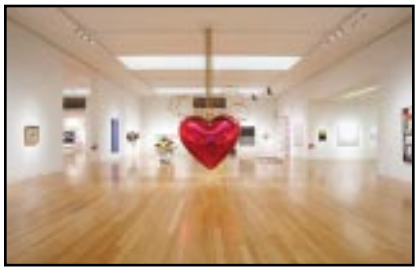
In the New York salesroom there are more than 285 cameras spread over 100,000 square feet on 10 floors. Security video records the storage area, exhibition areas, the central receiving area, executive offices and the galleries, in addition to the auction sales floor on the seventh floor.

"We were using DVR storage space to store our video," Adkins says. "We had storage on each one of 18 DVRs with one terabyte of storage. But since everything we record is with motion, we found that we were eating up too much storage space, and we could not capture the time frame of events that we wanted. We needed a solution that would give us one year of video storage on every camera in our building."

Adkins says he could attach another storage box to each DVR and add more hard drive space. "But that would change the structure of our console, and it would not give us what we wanted. Plus, the cost was too large for each unit," he says.

Adkins found a solution where storage drives are installed inside the DVR console to give him the storage space he needed. The storage system, from Instransa, blends server systems with integrated, scalable storage in a simplified package.

"We knew that this would not give us a year but it was a start and that we would build onto to it until we had enough disk drive space to maintain one year for all 285 cameras," Adkins explains. "The cost was much cheaper than we thought, and the installation is perfect. The video is literally streamed onto the system, so it's easy for us to call up when we need to. What I like is that we did not have to add additional cabinetry or hardware. We were able to work with what we already had."



Sotheby's art auction house in New York is using a video storage system that blends server systems with an integrated, scalable system, which protects its valuable artwork and ultimately, saves it money.

For Spec's Wine, Spirits and Finer Foods, storing video efficiently helps the company to protect itself in the event a lawsuit is filed regarding an accident at a store; two years covers the state's statute of limitations period. The company operates more than 60 stores located throughout Texas.

"If we can avoid one fraudulent claim of slip-and-fall, our surveillance system pays for itself," says Loss Prevention Manager Mary Evans.

Spec's made an internal decision to store its video footage for up to two years while upgrading to upgrade to IP cameras. Its previous DVR-based system was likely to cause storage bottlenecks. Adding additional hardware would be expensive.

Evans found a more robust external storage solution to replace her DVR-based system. The new virtual server from Pivot3 has given her a scalable solution that also extends the life of her video and gives her data recovery in the event of a failure.

On average, there are four virtual servers deployed per Spec's store, although larger stores and warehouses have more appliances in place.

UP IN THE CLOUD

Cloud computing is one way to store video, and it dominated conversations at this year's RSA conference, recently held in San Francisco.

Advocates of cloud computing – storing and sharing an organization's information online – say it holds the promise of lowering the costs of equipment maintenance and operation while improving mass deployment of software and updates.

But the idea of widely adopting and implementing these information management techniques has been met with different levels of caution.

Although most organizations are experimenting with cloud computing, the majority (82 percent) do not foresee cloud bursting initiatives, says a survey by Platform Computing.

The survey also found that security remains a principal concern regarding cloud computing (49 percent), followed by complexity of managing (31 percent) and upfront costs (15 percent).

"It may be right for others, but it's the wrong approach for us," Tony Castorino, director of physical security for Technicolor Inc. "The last thing I need is another source for a leak. At the end of the day I only have control over my employees. I don't want to advocate any proximity security or any security video. I believe it should be maintained internally.

"For certain industries it might have some legs, such as standard manufacturing

or warehousing," he adds. "But there are challenges…what if there's a breach? I can see some business looking at the economics of it, but all you need is one problem and you've blown all of your savings."

Technicolor has several facilities with anywhere between 10 to 200 video security cameras per facility. The newest facility has more than 200 IP video cameras and several megapixel cameras, he says.

The cameras record 24/7, and storage is one full year. Castorino recently upgraded his video storage using three enterprise servers from TimeSight Systems. "I exhausted every option," Castorino says. "I looked at building a file farm, rate storage, prepackaged file storage – What I found doesn't require me to fill an entire server room with computers." SECURITY

Technicolor's new Hollywood facility has more than 200 IP video cameras and several megapixel cameras that record video 24/7 and store it for more than one year.

Making Sense Out of Video Recording and Storage Options

A good memory is the right options.

Basic Requirements

How does your business work? How many locations? Do you have pre-existing video? Is the usage local or remote? What are your storage requirements? What is your budget and what's the purchasing cycle? Are your users sophisticated or not? How many users?

What's There Now?

What is going to be the method of compression? Are you navigating to H.264?

How many cameras will you need and which type? The higher the resolution, the more bandwidth and storage intensive it will be. Analog tends to need the least, network camera needs a bit more and megapixel cameras need the most. Frame rates will also affect bandwidth and storage.

Network Options, Concerns?

Figure out how your video network will be implemented and who is going to own and be responsible for what parts of the project at installation and beyond.

What is your existing infrastructure? Will this new video system bring pain to any existing infrastructure? Leave room for potential expansion in number of users/cameras. You should be concerned that the business system might cause you to lose recorded video. Should you share? Or, does it make sense to have two independent systems, thus, protecting both sides of the house, assuring that both can meet mission objectives?

Embedded or PC-based?

Non PC-based DVRs (embedded) tend to better recover from power fluctuations then their PC-based counterparts. They are not as susceptible to viruses, worms, Trojans or spyware. Not being computer-based, they are of little threat to corporate networks. Updates and patches require minimal IT involvement. They cost less and they are scaleable, which everyone will like as the system grows. Embedded DVRs feature a smaller footprint and there are large numbers of manufacturers and models from which to choose.

However, embedded DVRs tend to be hardware driven. Some argue that they are not as user friendly as PC-based DVRs. Last, most upgrades are entirely dependent upon the original manufacturer.

A Hybrid Solution?

Hybrid solutions bring a lot of benefits. Within one box, six, twelve, 18, 24, 30+ analog cameras or up to 32 or more IP cameras can be supported. You can have numerous audio channels, alarms and relays, and several terabytes of internal storage. PTZ control is a snap and GUI interfaces make operation easy. Some systems can deploy remote connectivity from hybrid to hybrid.

However, hybrid solutions are predominantly more expensive than non-hybrid solutions and some feel they contribute to putting too much in one box.

Thin or Thick Client?

Applications don't need to be installed at the local workstation with a thin client so Web-based programs can be used to access video from DVRs without needing to load a program locally. They are operating system and hardware independent; the user doesn't need to worry about Lynx, Windows, Mac or brands of computers.

Contrarily, although the thick client's application must be loaded at the local work station and the software is operating system and hardware dependent, it can be enormously feature rich. Those extra features often make the thick client cost-effective.

Proprietary or Open Architecture?

"Proprietary" raises flags for many. Yet, these systems can be very feature rich. Since they provide closed access, the integrity of the data is better managed. However, cross integration is limited and you will probably have future upgrades.

Although open architecture solutions typically provide fewer features, cross multiple-integration is easier between manufacturers. Both end-user and integrator will reap greater flexibility in deployment. Most consultants recommend going to the open architecture whenever possible.

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