LET'S WORK TOGETHER

Blended video is less expensive, faster and more secure

By Keith Jentoft

Even before the economic crisis, security directors or property managers could rarely afford to purchase the surveillance system they wanted. What began as a search for 10 cameras seen in a James Bond film resulted in 15 generic IP cameras and a few DVRs. They bought what they could afford, and in the worsening economy, the surveillance budget only gets tighter while the need grows.

Over the last six months, many large surveillance projects have been postponed or outright canceled because of budget fears and economic uncertainty. Blended video seems to be one answer.

THE BLENDED TREND

Blended video separates video into two categories: detect and notify, and stream and document. The blended video concept uses different types of hardware for each function and combines a monitoring center with self-monitored surveillance. Two radically different hardware systems, expensive surveillance and inexpensive sentries, support and complement each other. Blended video provides greater security by changing the system architecture from many fixed limited capability cameras to many inexpensive remote sentries detecting intruders and supporting a few high-definition surveillance cameras that enable the owner to see what is happening and coordinate response in real time.

Blended video can be a single megapixel PTZ camera with good optics mounted on a pole or rooftop providing high-definition surveillance over a large area working with two dozen wireless remote sentries. Installation is a key issue. Because most of a blended video system is wireless, installation labor is often 10 percent of the total project versus 40 percent for a traditional surveillance design using wired cameras.

Trenching and running cables outdoors to reach the perimeter and put wired cameras where they are most needed is prohibitively expensive. In today's economy, nobody can afford to deploy the best cameras everywhere, so users downgrade camera functionality to maximize coverage within the budget.

Standard video cameras have been historically poor at detection. While cameras and DVRs can use changes in pixels to detect and notify, this has proven unreliable and tends to generate false alarms when used outdoors. Thunderstorms have been such a problem for pixel-motion-detection that many companies simply disable their cameras during storms. Adding expensive analytics has helped, but it also has increased the system cost without completely eliminated the problem.

USING THE BEST LENSES

Blended video allows users to deploy the best state-of-the-art PTZ video cameras with megapixel resolution using the best lenses. What these cameras do well is document activity within their field of view and create high-quality streaming video. This is the James-Bond-type product people have in mind.

These cameras don't come cheap, but only a few are needed. Instead of trenching, they are centrally located where they can be easily installed and maintained. Instead of poor-quality images from cameras with limited functionality, facility staff now have a tool that they can use to view their entire site with sufficient clarity to coordinate response.

Blended video overcomes the downside of high-end PTZ cameras—they cannot look everywhere at once and do a poor job of actually detecting an intrusion. Blended video provides improved security by combining sophisticated surveillance cameras with a less expensive system, one that can be easily deployed to watch the perimeter, entry points and blind spots not visible from the wired cameras.

INSTALLATION ISSUES

For detection, outdoor PIR motion sensors can be effective, but they cannot discriminate between a human and a deer, and they require power, creating the same installation issues for wired cameras. More importantly, for maximum effectiveness, visual verification is necessary to confirm that an intrusion detected is not simply a stray dog or raccoon.

Users want to know what actually happened so they can coordinate an appropriate response. The answer is cost-effective wireless motion viewers that detect and notify self-powered remote sentries that incorporate outdoor PIR motion detection, digital cameras and infrared illuminators for night vision in a single unit. When they detect an intruder, they immediately send a 10-second video clip of the intrusion over the cell network to a monitoring station that notifies the user of the intrusion. The 24/7 UL-listed central monitoring station has live operators who view the video alarm from the remote sentries immediately and notify the user of the incident.

What makes this concept possible is affordable wireless remote sentries that can be installed anywhere without regard to power, trenching or cables. These remote sentries operate for two years on batteries and can be placed up to 2,000 feet from a separate battery-powered hub that transmits the 10-second video alarm over the cell network to the central monitoring station. One hub can support up to 24 remote sentries, and multiple hubs can be used in larger facilities.

One significant advantage of the blended video architecture is that the remote sentries can be continuously redeployed as situations change. Because there are no wires, they are simply fastened where needed and moved as desired. Construction is an excellent application for blended video. Many building owners want surveillance to monitor progress at the job site.

"In August of 2007, we began experimenting with the Videofied product on one of our construction sites to secure our homes," said Brian Plaster, owner of Signature Homes in Las Vegas. "Since installing the system, we have seen a drastic reduction in theft, and with the money we saved by not using guards, we were able to keep some key employees during the recent economic downturn."

Keith Jentoft *is the president of Videofied.*