

# Making Video Actionable

## Innovations in analytics can help with proactive security and beyond

While video is useful as a forensics tool, using it exclusively after an incident does not take advantage of today's high-definition cameras and video analytics software as a preventative solution. Being proactive means making video actionable, which increases the value of surveillance and enables staff — and possibly law enforcement — to respond to incidents as they happen.

What makes video actionable? Advances in video analytics using pattern based object classification and tracking technology have increased accuracy, enabling security personnel to react sooner and increase efficiency and usability. Video analytics using pattern-based object classification helps reduce false alarms and turns live and recorded footage into something more intelligent.

In the areas of perimeter control and remote monitoring, actionable video can help businesses not only better monitor activity, but could also help improve operational efficiencies and reduce costs.

### Improved perimeter protection

Innovations in video analytics have allowed businesses and municipalities to respond to perimeter protection in real time with greater precision.

Value is gained when analytics culls the events that generate an alarm. Advanced video pattern-based algorithms are able to accurately recognize the movements and characteristics of people and vehicles, while ignoring any activity that isn't relevant to a scene. Continuously self-learning analytics with no manual calibration required enables users to more easily customize the system to meet their specific location's needs.

Improved situational awareness through actionable video benefits businesses in several ways:

*Fewer false alarms* — Unlike other video-sensing technologies, object classification analytics is able to distinguish between vehicles, people, and non-triggering objects. For example, a car will trigger an alert if it crosses a predefined directional line or moves in the wrong direction.

*Detection of suspicious activity* — Not only can actionable video with advanced analytics detect specific objects, it can also be configured to alert based on how long an object is in an area, so that people or vehicles that loiter can be observed in real time.

*A budget-friendly solution* — A surveillance system with the ability to detect breaches of secure perimeters can cost much less than active fence sensors and the integration into a VMS system.

## Addressing the challenges of remote locations

Businesses with widely distributed assets, such as remotely located power stations, offsite lots or cell towers face particular surveillance hurdles. Video cameras can help secure and manage dispersed and remote areas, enabling centralized personnel to respond to security threats and operational issues. But simply having cameras available isn't enough.

Video surveillance at remote locations can be difficult due to inadequate IT resources, which can limit the ability to view and record video data. And when there are many remote sites, the number of devices and complexity of the system can create problems for system administration, maintenance, and even users trying to view the right data.

For remote sites, making video actionable means keeping bandwidth low to ensure reliable, immediate access to the data. Utilizing a recording server and video analytics can help address this challenge.

One solution for reducing the opportunity for data loss is to keep the recording as close to the cameras as economically viable. When coupled with greater intelligence at the edge through video-analytics-enabled cameras, this approach offers opportunities to reduce how much data is recorded, which enables users to optimize hardware requirements and costs.

Video analytics performed on or near the camera enables the video to be analyzed and tagged with metadata and then streamed to a local video recorder that intelligently decides whether to record based on live events. This dramatically reduces the amount of footage recorded, minimizing storage and bandwidth needs without losing critical data.

Furthermore, when a remote investigator needs to search the video, the metadata can be quickly searched, retrieved, and presented to the user, where only the essential video is retrieved and transmitted over a long distance.

## Helping with operational efficiencies

Beyond mitigating the impact of damage and loss from incidents, actionable video optimizes workload. One operator can monitor more scenes using fewer cameras, which boosts security personnel's capabilities and reduces false alarms. Users are empowered with verified video — and sometimes audio interaction with perpetrators — to help law enforcement dispatchers respond to incidents in progress.

Administrators can benefit from a variety of efficiencies. Current video technology can enable them to:

- Implement a near-instantaneous search for people and vehicles.
- Help maximize the physical area covered and increase the probability of taking the proper action to events.
- Find people or vehicles, regardless of which analytics events are configured beforehand.

- Email footage of incidents to law enforcement immediately when dispatched.
- Combine multiple clips across their time frames.
- View and respond from any mobile device.
- Keep bandwidth and storage low.

## Can actionable video reduce costs?

Typically, security isn't thought of as a revenue generator, but security technology has the ability to prove its value to the overall business.

The most obvious cost savings from actionable video is to help mitigate incidents before they escalate. For example, the rise in copper theft in North America is of concern to a variety of sectors including telecommunications, utilities, transportation, and construction. Video surveillance can help protect vulnerable remote sites, saving companies not only from inventory loss and repairs, but from insurance costs, attorney fees, and productivity losses. For instance, hundreds of incidents of copper theft occur in Canada each year, and the average cost of a single incident is \$2,100.<sup>1</sup> Other copper theft trends from 2014:

- The U.S. Department of Energy estimates that copper theft costs U.S. businesses nearly \$1 billion in losses annually.<sup>2</sup>
- The Canadian Electricity Association estimates that copper theft costs the electricity sector approximately \$40 million each year.<sup>1</sup>

Actionable video helps reduce costs in other ways as well. As video analytics has become more sophisticated, it can help decrease the cost model for monitoring by increasing the productivity of security personnel. It can be cost prohibitive to deploy on-site security personnel at remote locations. However, employing remote recording and viewing reduces the need to hire additional staff.

High-definition megapixel cameras cover a wider area with fewer cameras. Plus, image resolution can be increased while minimizing the requirements — and costs — for storage and bandwidth. Analytics optimizes recording volume so monitoring is more efficient and affordable.

Costs can also be lowered through centralized maintenance, including system upgrades and diagnostics. In addition, reducing bandwidth requirements minimizes administration and maintenance time.

## Transforming surveillance

Security leaders are evolving to be more future oriented and able to envision the possibilities of effective and actionable intelligence. The integration of surveillance cameras and analytics systems will continue to progress to help provide businesses with a holistic and effective solution for monitoring their facilities.

The exponential increase of sophistication in video analytics positively impacts the security sector. The accuracy of object search programs will continue to improve to provide security personnel with even more powerful tools not just for after-the-fact forensics purposes, but for proactive incident response.

<sup>1</sup>Canadian Electricity Association, “Copper Theft from Canada’s Electricity Infrastructure: Dangerous, Expensive and a Threat to Reliability,” January 2015.

<sup>2</sup>ERICO, “Combating Copper Theft, an analysis of the changing construction facility landscape and how to protect your investment, work, and workforce in the 21st century,” 2015.