

Video Analytics: Extending Security With Technology



Choose with Confidence.

Few new technologies have excited the imagination of video security professionals quite like intelligent video analytics. Through constant automated digital screening and filtering, video analytics can identify specific conditions and notify operators of potential situations, allowing security officials to make quick, informed decisions.



The Power of Video Analytics

Video analytics are engineered to aid security professionals in making better-informed decisions more quickly when responding to incidents. Unlike video systems operated and monitored by people, intelligent algorithms can monitor scenes continuously without getting tired or bleary-eyed — automatically sounding an alarm to notify system operators of abnormal activity.

Programming Video Intelligence

Most video analytics programs use a mathematical model to recognize the background of a scene. Once the system establishes the baseline for the background, it can recognize pixel differences of objects that are “on top of” or “in front of” it. When a foreground object is detected, the system begins to identify features: size, color, and movement. These characteristics are used to track objects and recognize abnormalities to notify security personnel.

Motion Tracking

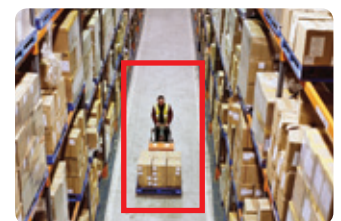
Tracking motion is a fundamental capability of many intelligent video algorithms. Directional motion and object counting are two examples — a system cannot count what it cannot track. Pelco™ by Schneider Electric™ video analytics are developed with the technology to perform these tasks, allowing you to rest assured that, even when human eyes aren't watching every monitor, an intelligent computer is.

Setup Training

Configuration is the most important aspect of an effective intelligent video system. Through our Pelco Global Training Institute (PGTI), we offer you detailed instruction for setting up your analytics. Our instructor-led courses and series of training videos guide you through the critical processes of calibration, sensitivity adjustment, and size and direction filters that determine the camera's ability to differentiate and report events, reducing false alarms and missed detections. Our training also includes recommendations on scene types and camera positioning for the various analytics behaviors to improve the probability of successful detections.



Ability to Track Objects and Recognize Abnormality



Tracking Motion



Pelco System Configuration

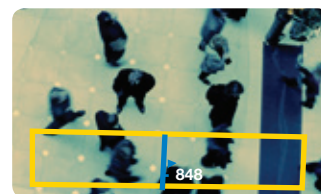
Analytics Behaviors: What Can They Do?

Pelco offers various products with video analytics capabilities, including Sarix fixed IP cameras, Spectra HD pan/tilt/zoom (PTZ) cameras, Sarix TI thermal imaging cameras, and video encoders. Based on the type of installation and the customers' missions, Pelco has the reliable solution.



Directional Motion

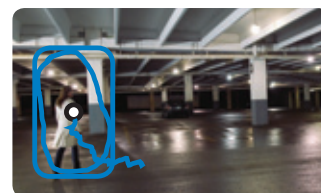
When motion is detected in a specific direction, an alarm is triggered to notify security personnel. Users have wide flexibility in defining areas of interest and activity thresholds to minimize false alarms. It's ideal for identifying people walking against the normal flow in airports, cars taking an abnormal path in traffic settings or parking lots, and an array of other security scenes.



Directional Motion

Adaptive Motion

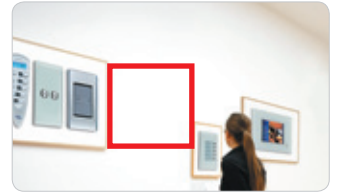
This advanced motion detection behavior calibrates to scene conditions, allowing the system to distinguish targets from other movement in a scene, such as headlight glare, leaves blowing, a flag flying, or snow falling. It's ideal for identifying people and vehicles in parking lots and for perimeter detection when these and other such outdoor conditions are present. Adaptive motion reduces false alarms due to environmental conditions.



Adaptive Motion

Object Removal

An alarm triggers when a stationary object, such as a priceless piece of art, is removed from a selected scene. This behavior allows the user to define an item or area of interest in a scene. Motion is allowed in the protected zone, but if an object is removed, an alarm is triggered. It's ideal for museums, high-end retail, and similar asset protection situations.



Object Removal

Object Counting

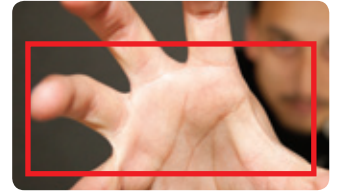
This behavior counts objects when motion is detected in a specific direction. Users have wide flexibility in defining areas of interest and activity thresholds. An alarm is generated when the threshold is exceeded. It's ideal for counting cars on a roadway, products at a manufacturing plant, people entering/exiting a building, and similar applications.



Object Counting

Camera Sabotage

This advanced video loss detection recognizes when video has been compromised. For example, if a vandal paints or covers a lens or reaches to move a fixed camera away from an intended scene, an alarm is triggered. It's ideal for an array of high-security environments.



Camera Sabotage

Abandoned Object

An alarm triggers when a stationary object appears and remains in a scene, such as a person setting down a briefcase or duffel bag. This behavior allows the user to define an object or area of interest in a scene. Motion is allowed in the protected zone. It's ideal for malls, campuses, transportation hubs, and more.



Abandoned Object

Loitering Detection

When people or vehicles remain in a specified zone longer than the user-defined time allows, an alarm notifies security personnel. This behavior is effective in real-time notification of suspicious activity around such areas as ATMs, stairwells, and school grounds.



Loitering Detection

Stopped Vehicle

Vehicles stopped near a sensitive area longer than the user-defined time allows are detected. This behavior is ideal for airport curbside drop-offs, parking enforcement, suspicious parking, traffic lane breakdowns, and vehicles waiting at gates.



Stopped Vehicle

AutoTracker

Unlike other analytics behaviors that function on a fixed camera, this behavior, currently available at no extra cost in Spectra™ HD cameras, has PTZ capability to track vehicles or people entering or stopping in user-defined zones. Once identified, the camera locks on and follows the subject's path. This analytic is ideal for building perimeters.



Automatic Tracking of People/Vehicles

Wide Range of Options

Pelco video analytics packages are included at no extra cost with Sarix fixed IP cameras, Spectra HD PTZ cameras, Sarix TI thermal cameras, and NET5400 Series encoders. Pelco Endura™ and Digital Sentry™ systems utilize Pelco camera analytics to maximize robust video management applications.

Sarix Fixed IP Cameras

Select Sarix™ fixed IP cameras include eight user-configurable behaviors that are loaded for free.* The cameras are capable of running up to three behaviors at the same time. For each behavior, several custom profiles can be created containing different camera settings.

Product Features:

- SureVision™ technology for wide dynamic range (WDR) and difficult lighting conditions
- Open IP standards
- Up to 1080p at 30 IPS
- Low-light sensitivity

* IE20DN, IXE10LW, and Sarix Enhanced later in 2014.



Spectra HD Positioning System

Spectra HD is a PTZ camera system that can perform unique behaviors, such as AutoTracker, which require the camera's ability to move. In addition to AutoTracker, the Spectra HD Series features eight analytic behaviors.

Product Features:

- Up to 1080p at 30 IPS
- Control/monitor video over IP networks
- Up to 30X optical zoom, 12X digital zoom
- 360° continuous pan rotation at 280° per second



Sarix TI Thermal Cameras

Sarix TI is an advanced thermal imaging system designed for easy integration into any new or existing video security application. Sarix TI includes five user-configurable analytic behaviors that excel in impossible lighting conditions with automatic detection, especially in blinding sun, smoke, and total darkness.

Product Features:

- Up to 640 x 480 resolution
- IP and analog outputs
- IP66 rated
- Standard Sarix application programming interface (API)



NET5400 Series Encoder

The NET5400 Series adds a sophisticated video analytics engine to the normal video encoder function, with the ability to transform a normal security camera (including analog) into an intelligent one. Once the encoder is installed and configured, object and activity detection behaviors can interpret unwanted activity and trigger an alarm.

Product Features:

- H.264 baseline, main or high profile compression
- Dual stream at up to 4CIF, 30/25 IPS
- Coaxitron™ and Pelco D PTZ protocols
- 1-, 2-, and 4-channel models



Building an Overall Business Solution

Pelco products integrate into an overall business solution strategy from Schneider Electric. Whether it's the Abandoned Object feature helping a store stay clean or the Object Counting feature providing data for how many customers are served, there's no limit to how Pelco technology can be applied.



Pelco Video Analytics Behaviors

Pelco analytics packages are included with select Sarix cameras, Spectra HD cameras, Sarix TI thermal cameras, and NET5400 Series encoders at no extra charge. Pelco analytics work with the Pelco Endura and Digital Sentry systems.



Behavior	Sarix Models (IXE, IDE, IEE, Enhanced Range*)	Spectra HD	Sarix TI Thermal	NET5400 Series Encoders
Abandoned Object	•	•		•
Adaptive Motion	•	•	•	•
Camera Sabotage	•	•	•	•
Directional Motion	•	•		•
Loitering Detection	•	•	•	•
Object Counting	•	•	•	•
Object Removal	•	•		•
Stopped Vehicle	•	•	•	•
AutoTracker		•		

* The Sarix Enhanced Range currently ships with Adaptive Motion and Camera Sabotage analytics. The full suite of eight built-in analytics will be added later in 2014.

For more information, please visit pelco.com or call (800) 289-9100 (United States and Canada) or +1 (559) 292-1981 (international). For pricing information or to purchase Pelco products, please contact your manufacturer's representative or the Pelco office in your area.

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