

Symmetry™ EN -7500 Series Video Content Analytics

G4S Technology

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Video Content Analytics

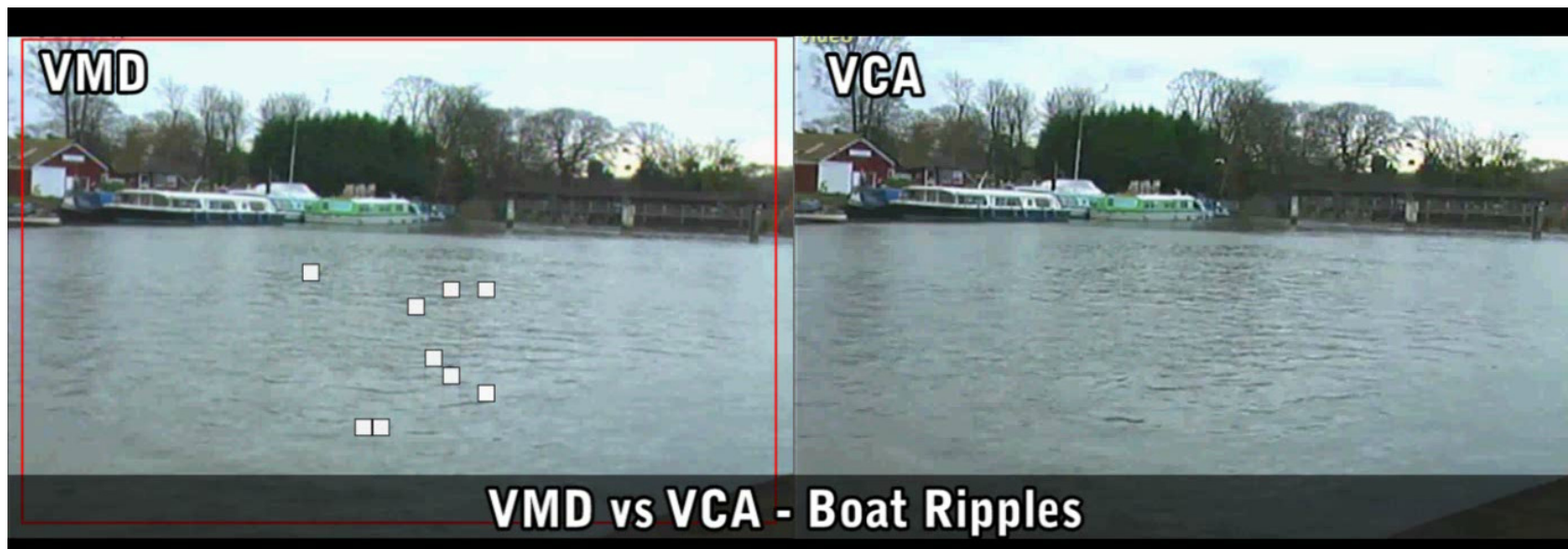
- Video Content Analytics have been available for over 10 years but have not been widely used for a variety of reasons:
 - Expensive to purchase
 - Required additional processing computers
 - Difficult to configure
 - Unreliable
- Video Content Analytics are now much more cost effective option
- Separate processing computers are no longer required

Video Content Analytics

- The Symmetry EN-7500 Video Content Analytics configuration software is easy to learn and use
- Analytics are now significantly more reliable
- Analytics are particularly good for:
 - Addressing problems that other security systems cannot solve
 - Adding an additional layer of security to existing equipment
 - Generating alerts for operator review

Motion Detection

- Up to 8 detection zones
- Each detection zone has selectable sensitivity and object size



Intelligent Detection

- Intelligent Detection is a basic form of analytics that is standard with every Symmetry EN-7500 device
- A unique tracking engine performs intelligent analysis of motion for intrusion and tamper detection
- Intelligent Detection includes:
 - **Object Presence** tracks up to 100 targets to generate real time alerts on objects present in up to 40 overlapping detection zones
 - **Tamper Detection** generates a tamper alarm if the camera is covered, moved or otherwise adjusted to affect the camera view

Tracking Engine



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Analytics



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Video Content Analytics

- VCA enhances Intelligent Detection by including an extensive range of sophisticated tools for detecting moving and stationary objects:
 - **Enter and Exit** – Detects objects moving into / out of a detection zone
 - **Appear and Disappear** – Detects objects which suddenly appear or disappear (as opposed to entering or exiting) a zone
 - **Stopped** - Detects objects in a zone that are stationary for a specified period
 - **Dwell** – Detects objects that remain within a zone (but may continue to move) for a specified period

Video Content Analytics

- VCA is further enhanced with analytics filters:
 - **Direction** – Filters objects moving in given directions with a specified acceptance angle
 - **Object Classification** – Allows objects to be filtered depending on parameters such as speed, area and height
 - **Counting** (linked to the detection rule) – Allows objects to increment or decrement a counter displayed on-screen

Tamper Detection

- Obscuration
 - Generates a tamper alarm if camera is covered
 - Selectable area to be covered and duration before alarm generated
- Movement
 - Generates a tamper alarm if the camera is moved
- Defocus
 - Generates a tamper alarm if the camera focus is impaired
- Adjustable duration to alarm



Image Calibration

- Graphical user interface to set calibration of cameras:
 - Height
 - Tilt angle
 - Vertical field of view
 - Pan angle
 - Roll angle
- 'Mimics' virtual ruler and transparent grid to help set calibration
- Simple and efficient to operate

Image Calibration

- ▶ Basic Configuration
- ▶ Video & Audio
- ▶ Event Configuration
- ▶ System Options
- ▶ IO Configuration
- ▶ Maintenance
- ▼ VCA
 - Enable/Disable
 - Zones and Rules
 - Calibration
 - Classification
 - Tamper Detection
 - Burnt-in Annotation
 - Advanced
 - Load/Save Settings
- ▶ Motion Detect
- ▶ Stabilizer
- ▶ Activation
- ▶ About

Calibration

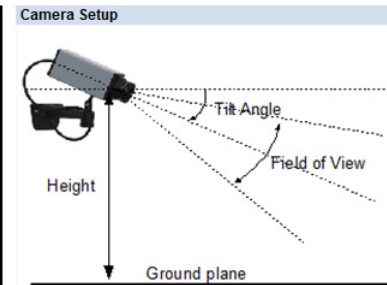


2010-10-14
22:43:15.675

Advanced Parameters

Pan Angle deg

Roll Angle deg



Calibration Status

Uncalibrated

Preset Setups

Select

Camera Setup

Height meters

Tilt Angle deg

Camera Intrinsic Parameters

Vertical Field of View deg

Remove Calibration

Video Control

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Object Classification

- Allow objects on screen to be classified
- Classification based on
 - Maximum and minimum size
 - Maximum and minimum speed
- Operation of Analytics can be refined depending on object classification
 - Alarm generated if person detected
 - No alarm if dog detected

Object Classification



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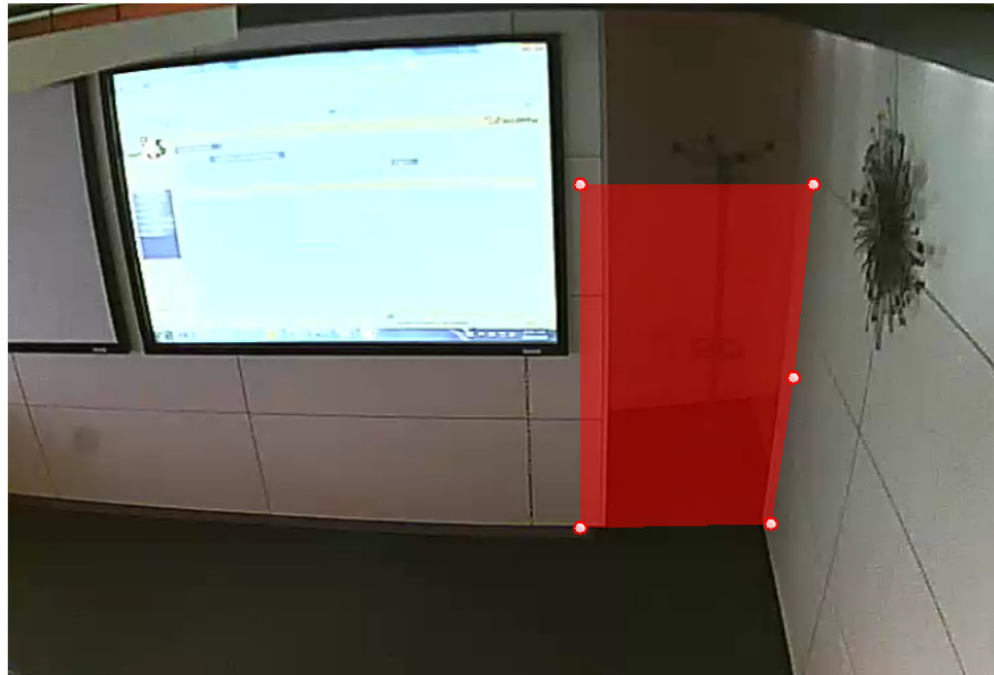
Configuring Analytics

- To configure:
 - Setup detection Line or Zone
 - Decide on type of alarm
 - If needed, calibrate camera and add filters:
 - Height
 - Size
 - Speed

Analytics

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Zones and Rules



Tree	Value
Zone 0	
Name	Storage Entrance
Color	Red
Type	Detection
Object Class Filter	
Include/Exclude	Include
<input checked="" type="checkbox"/> Filter 0	Person
<input type="checkbox"/> Filter 1	
<input type="checkbox"/> Presence	
<input type="checkbox"/> Enter	
<input type="checkbox"/> Exit	
<input checked="" type="checkbox"/> Appear	Zone 0-Appear
<input type="checkbox"/> Disappear	
<input type="checkbox"/> Stopped	
<input type="checkbox"/> Dwell	
<input type="checkbox"/> Direction Filter	
<input type="checkbox"/> Speed Filter	
<input type="checkbox"/> Tailgating	
<input type="checkbox"/> Left/Taken Object	

Id	Rule Type	Rule Name	Zone Name	Object Type	Start Time	End Time

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Analytics

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Zones and Rules



14-10-2010
 16:11:25.300

Tree	Value
Zone 1	
Name	Zone 1
Color	Green
Type	Detection
Object Class Filter	
Include/Exclude	Include
<input checked="" type="checkbox"/> Filter 0	Person
<input type="checkbox"/> Filter 1	
<input type="checkbox"/> Presence	
<input type="checkbox"/> Enter	
<input type="checkbox"/> Exit	
<input type="checkbox"/> Appear	
<input type="checkbox"/> Disappear	
<input type="checkbox"/> Stopped	
<input checked="" type="checkbox"/> Dwell	Zone 1-Dwell
Threshold (secs)	5
<input type="checkbox"/> Direction Filter	
<input type="checkbox"/> Speed Filter	
<input type="checkbox"/> Tailgating	
<input type="checkbox"/> Left/Taken Object	

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