

AXIS Communications Academy Webinar Series

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Participant audio will be muted until Q & A session following the presentation

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www.axis.com

This is Axis

- > Founded in 1984
- > IT company driving the shift towards digital video surveillance products
- > Global partnerships through distributors, resellers and system integrators
- > Offering the market's broadest portfolio of network video products
- > Focused on Network Video Solutions (99%)
- > Worldwide presence in more than 20 countries, 1300 employees
- > Listed on NASDAQ OMX, under the ticker AXIS



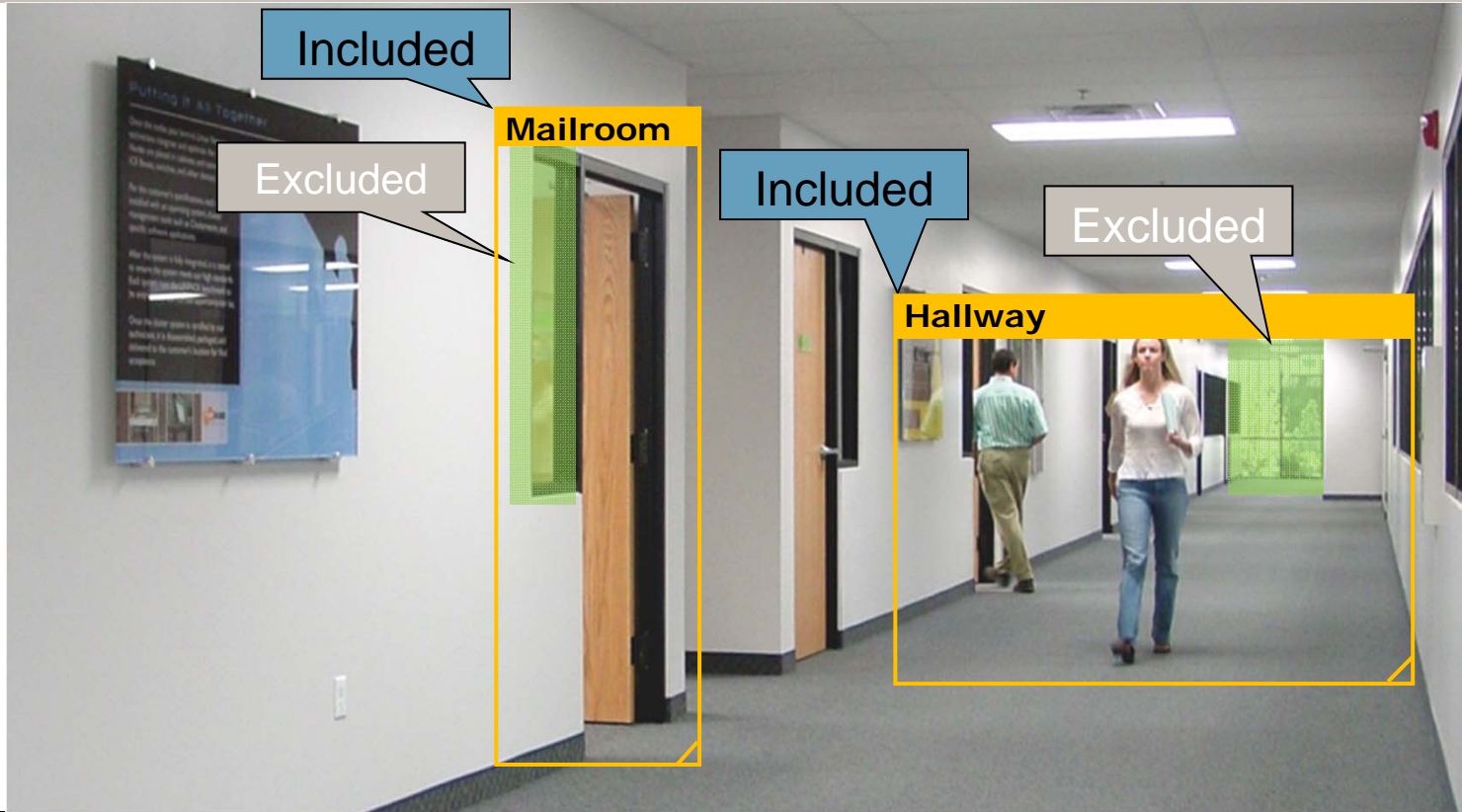
AXIS Video Motion Detection

Configuring Motion Detection Areas and Triggers



www.axis.com

Using motion trigger windows



Motion trigger properties

Included

Mailroom

Windows Name:

Include1

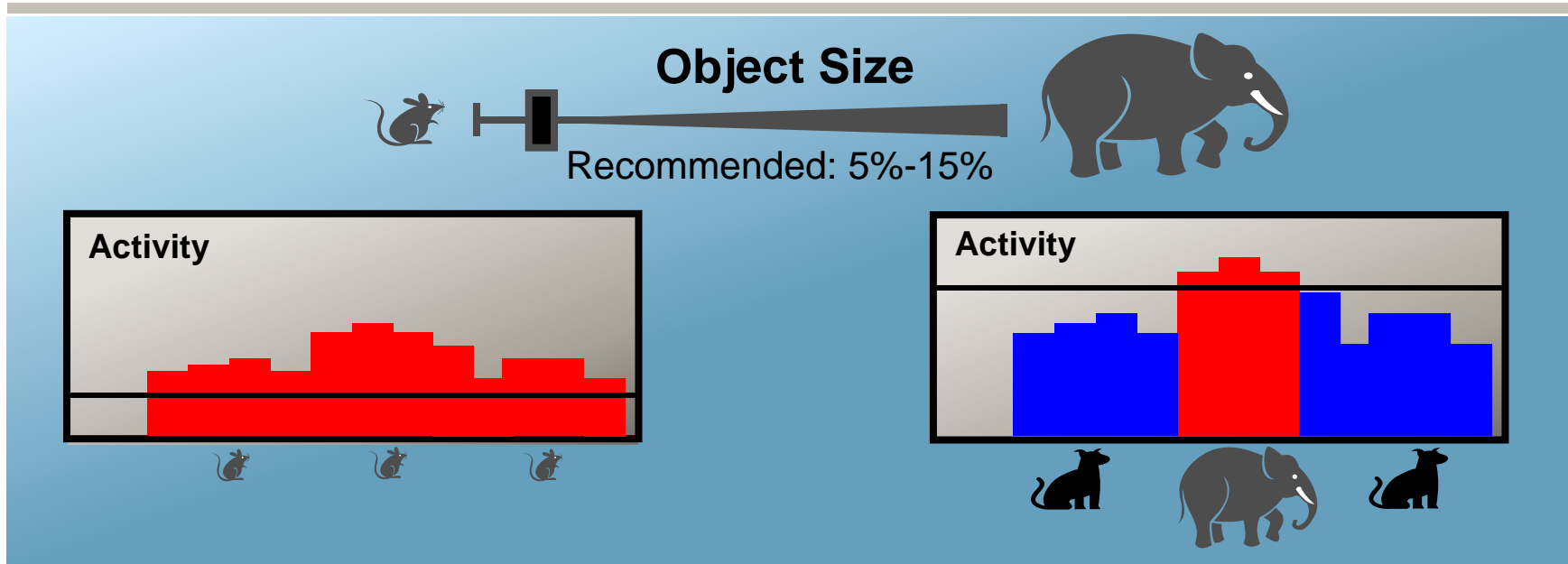
Object Size

History

Sensitivity

Activity

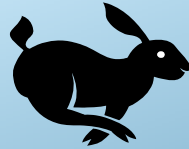
Object size



- > A low value will allow smaller objects to trigger the motion detection – more false alarms
- > A high value will raise the motion detection threshold – triggering only on larger objects

Note that these values are relative to the window (or region) size

History



History

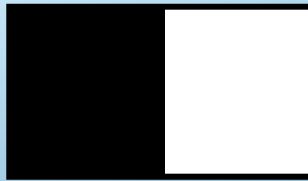
Recommended: 60%-90%



Low - Objects will trigger motion detection for only a very short period before considered non-moving

High - Objects will trigger motion detection for a long time before considered non-moving

Sensitivity slider



To only detect flashing light, or to see if a light is on or off, select a low sensitivity.

Sensitivity



Recommended: 75%-95%



Ordinary colored objects on ordinary backgrounds will trigger motion detection.

A word of caution about motion detection

- Video is not intelligent – it is based on pixel evaluating algorithms!
- > Do not base mission critical surveillance on motion detection only
- > Practice makes perfect
 - Motion detection controls might be affected by lighting conditions

AXIS Video Motion Detection 2.1



AXIS Video Motion Detection 2.1
Easy setup motion detection application

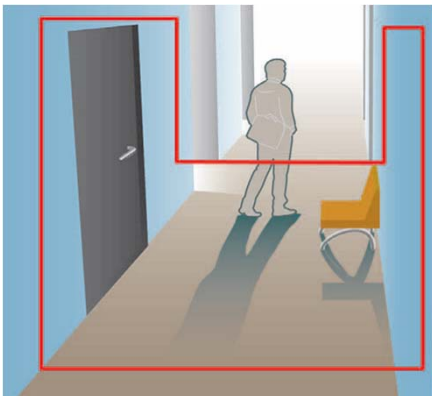
Overview

- > **VMD 2.1 is a general, broad market Motion Detection**
 - Primarily for reducing bandwidth and recording space
- > **VMD 2.1 is installed in cameras using AXIS Camera Application Platform**
 - Similar to AXIS Cross Line Detection
- > **VMD 2.1 is free of charge and requires no licenses**
 - Unlike AXIS Cross Line Detection
- > **VMD 2.1 is much better than the built-in motion detection**
 - Easier to configure
 - Better detection rate and less false detections

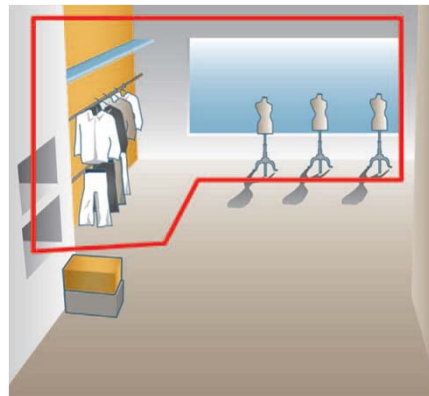


Typical application areas

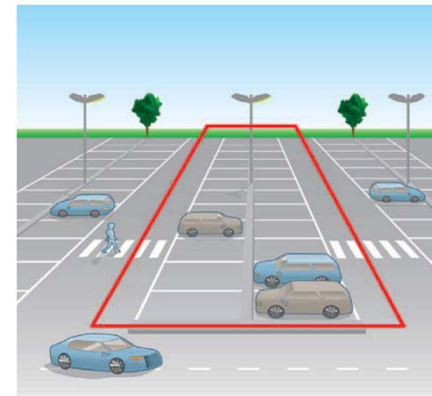
- > **Areas that have periods of no moving objects (static scenarios)**
 - Offices, corridors, staircases
 - Retail stores, storage rooms
 - Parking lots, building perimeters



Offices



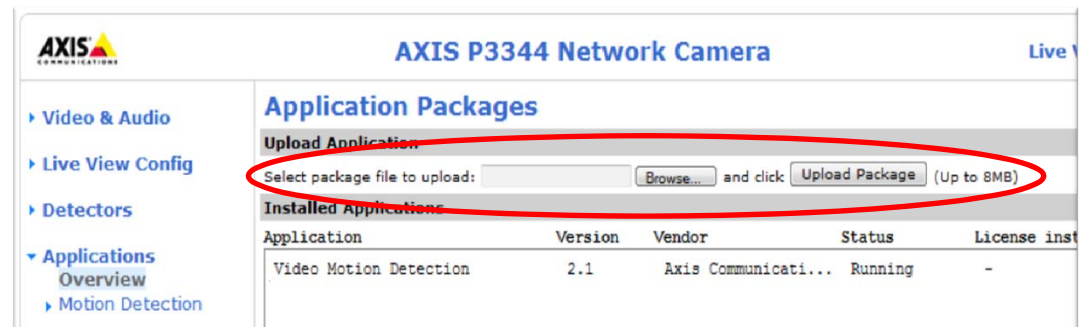
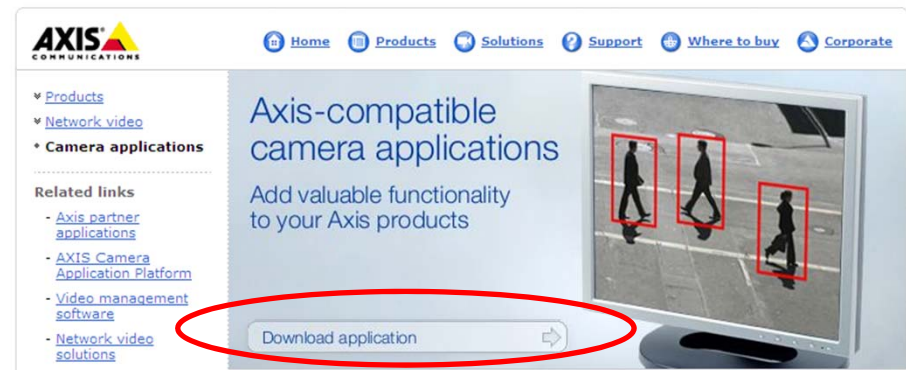
Shops



Parking lots

Easy installation

- > Download the application from www.axis.com
- > Install the application in the camera
- > Start application



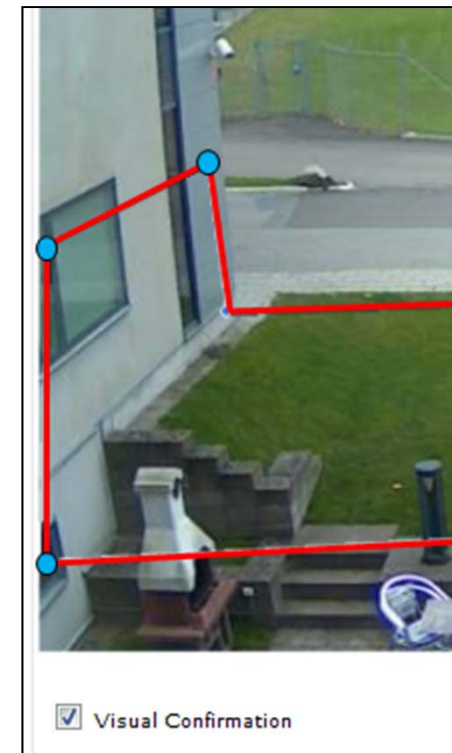
Configuration

The screenshot displays the configuration page for an AXIS P3344 Network Camera. The page title is "AXIS P3344 Network Camera" and it is in "Live View" mode. The navigation menu on the left includes: Video & Audio, Live View Config, Detectors, and Applications (with sub-items: Overview, Motion Detection, Settings, and About). The main content area is titled "Application Settings: Video Motion Detection" and includes a link to "AXIS Video Motion Detection settings" and a "Status:" field. A large blue arrow points from the "Settings" link to the live view window. The live view window, titled "AXIS Video Motion Detection", shows a camera feed of an outdoor area with a building, a lawn, and a parking lot. A white polygon outlines the main area of interest, and a blue polygon outlines an excluded area. At the bottom of the live view window, there is a "Visual Confirmation" checkbox and "Add Exclude" and "Remove Exclude" buttons.

- > Define area of interest
- > Define Exclude areas if needed

Configuration validation

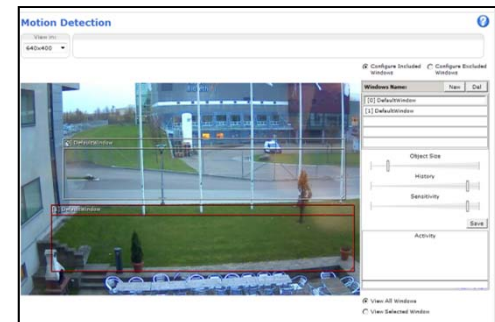
- > **Visual confirmation validates detection behavior**
 - No additional event configuration or external applications needed
- > **Line turns red when objects are detected within the area of interest**



VMD 2.1 vs. Built-in Motion Detection (Part 1)

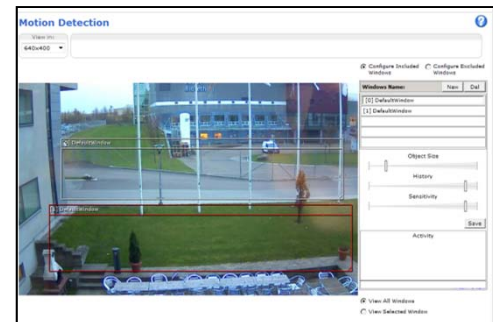
- > **Detection algorithm**
 - Behavior
- > **Configuration**
 - Parameters
 - Area of Interest
- > **Interface**
 - GUI
 - API

The built-in motion detection will remain in the cameras for backward compatibility



VMD 2.1 vs. Built-in Motion Detection (Part 2)

- > **Behavior: VMD 2.1 detects objects**
 - No false triggers due to light changes
 - No false detection due to image noise (low light)
 - Detection rate does not change due to light variations (day/night or seasons)
 - Steady event state while objects are detected
- > **Configuration: VMD 2.1 makes it easy**
 - Free shape area of interest, not just squares
 - No additional parameters that may take days of tweaking



VMD 2.1 vs. Cross Line Detection 1.0

Cross Line Detection 1.0

- > Primary use case is detecting objects entering or leaving an entrance
- > Can filter on object direction
- > Sends a “pulse” when objects touches the line
VMD keeps steady active state while objects are detected



VMD 2.1 vs. 3rd Party VMD

> VMD 2.1

- Very competitive regarding detection rate
- Target use case is recording control

> Third party VMD

- May support filter on object size, speed & direction
- May automatically ignore swaying objects
- Target use-cases are recording control and alarm notifications for operator response



Third party
VMD

Considerations

- > **Do not run VMD 2.1 and built-in motion detection at the same time**
 - This will result in poor performance for both applications
- > **Shadows, reflections and swaying objects**
 - Moving contours may result in object detections
- > **Very fast (or very slow) objects may not be detected**
- > **VMD 2.1 will work on PTZ cameras but will trigger on movement**
 - Use “Image Freeze on PTZ” to suppress these detections
- > **Lighting level should be within the camera specification**
 - Low light may reduce detection rate but will not cause false detections
- > **Camera mounting should not be subject to vibrations**

Camera integration

- > Integrates into event management
- > Ability to initiate actions in camera
 - Record
 - Notify
 - Control I/O port

Action Rule Setup

General

Enable rule

Name: Record_VMD_2_1

Condition

Trigger: Applications VideoMotionDetection

Is active: Yes No

Schedule: Always (No Schedule)

Additional conditions

Actions

Type: Record Video

Stream profile: Balanced

Duration: Pre-trigger time 1 second(s)
 While the rule is active
 Post-trigger time 10 second(s)

Storage: NetworkShare

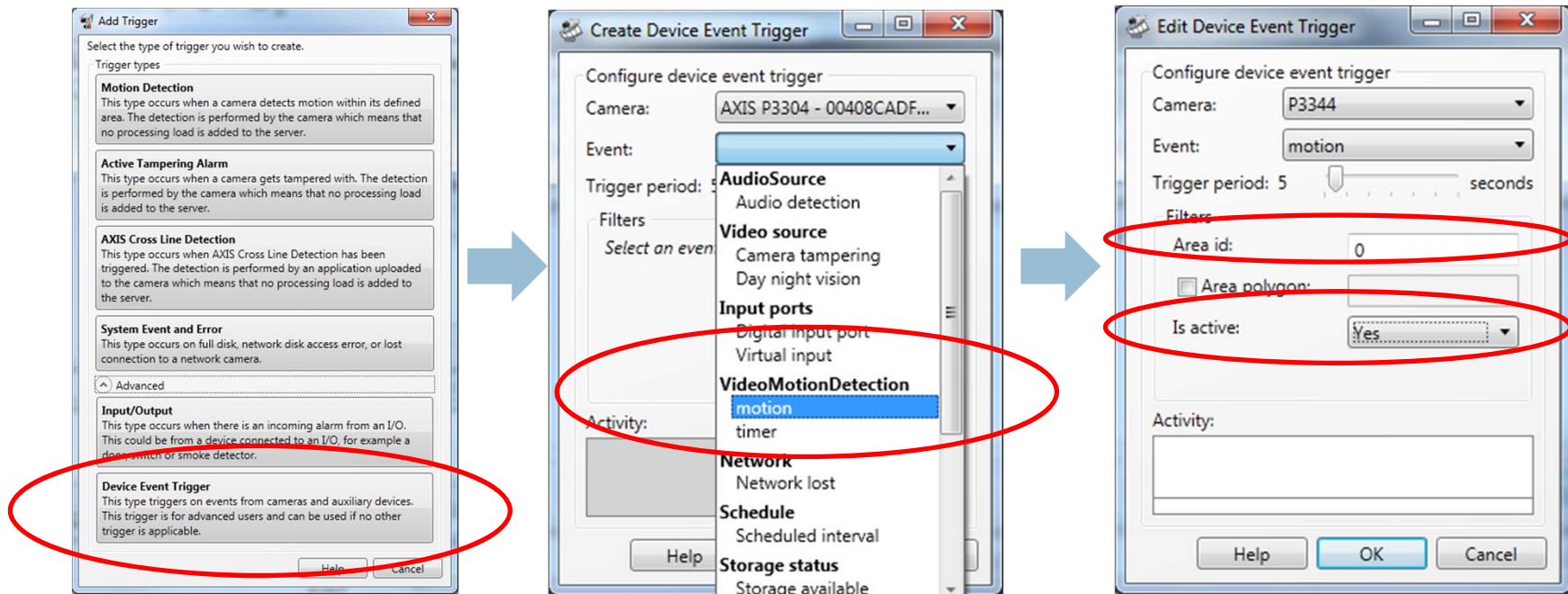
OK Cancel

VMS integration

- > **VMD 2.1 needs to be configured in the camera user interface**
 - VMS has not yet support for configuration (defining area of interest)
- > **AXIS Camera Station 3.50 can trigger on VMD 2.1 without “hard-coded” integration**
 - AXIS Camera Station 3.50 supports Camera Event Streaming (Device Event Trigger, see next slide for example)
- > **3rd party Video Management System**
 - 3rd party VMS is required to integrate VMD 2.1
 - No known VMS has support for Camera Event Streaming

Detecting VMD 2.1 in AXIS Camera Station 3.50

AXIS Camera Station - Device Event Trigger



Product compatibility

- > Firmware 5.40.x
- > AXIS Camera Application Platform
- > Current compatible products:
 - AXIS P1343/44/46/47 (FW 5.40.x)
 - AXIS P3301/04/43/44/46/47/67 (FW 5.40.x)
 - Product page for VMD 2.1 will be updated
- > Exceptions
 - AXIS Q1602/04 with FW 5.40.3 will not work.
A service release is required
- > Excluded products
 - AXIS M1011/31/W, AXIS M3011, AXIS M7001, AXIS P1311



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