AXIS Optimizerforensic search

Accelerate forensic search investigations

What is it used for?
Rapidly perform forensic search in Milestone XProtect®

When is it available?
Planned global availability: Free feature included in AXIS Optimizer version 4.1
Planned release date: May 20, 2021

Why this feature is needed?
The vast majority of forensic investigations involve video evidence. Video can not only come from various sources. Investigators are often not certain of what or whom they are looking for, exactly when an incident took place, or the entire location and areas in which an incident took place. On top of this, the sheer amount of video sent from just one camera mounted at one location over a day, week or even longer is extensive — the greater number of cameras, the more video there is to review. So investigators must spend hours reviewing video clips in search of a single incident or activity, which is inefficient.

This explains why there is a growing demand for forensic search features. Which is why forensic search features are a central aspect of most video surveillance systems.
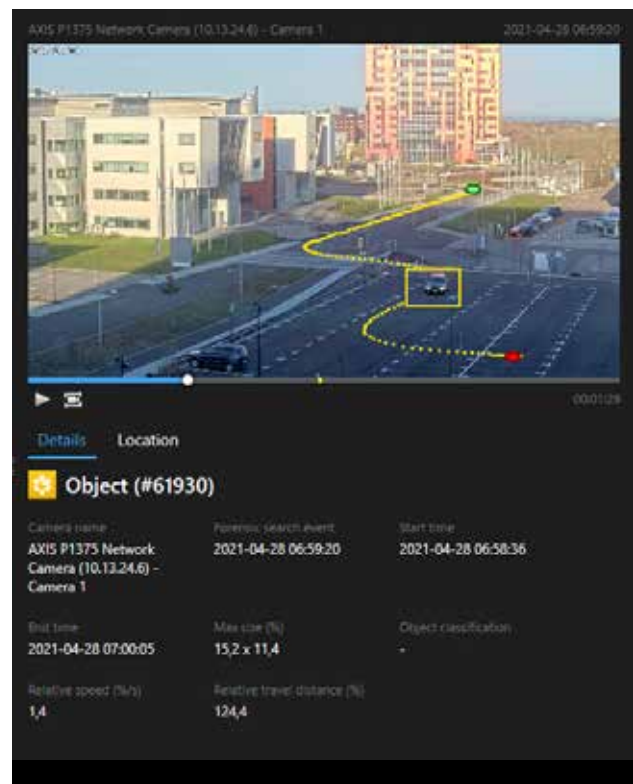
AXIS Opimizer forensic search extends forensic search capabilities for Axis devices in Milestone XProtect via its centralized Search framework. It ensures objects detected by Axis cameras easily searchable in Milestone XProtect.

Whom is it for?
Axis-Milestone XProtect operators and investigators who need to perform forensic investigations or search for video recordings

Current situation it address
Currently, XProtect offers some native forensic search possibilities for connected cameras. However, these are very limited. Already

today Axis devices from firmware 9.60 send valuable video analytics data, including bounding boxes. But as there is no search capabilities built in XProtect, this data can't be used. Considering the improved data current and future Axis cameras send to the VMS system, there is a need to improve the centralized Search integration by adding more search criteria and attributes for Axis devices.

New capabilities and features

Upon the release of AXIS Optimizer version 4.1, it will be possible to filter search results by the attributes listed below for recorded video on one or multiple Axis cameras. For each search result, AXIS Optimizer can show where the object is seen in the thumbnail and its travel path. By filtering out search results for less interested attributes, the investigation is both quicker and more accurate.

Attributes to filter search results

> Region of interest
- Search for objects that moved in a specific area.
> Direction (Right, Left, Down, Up)
- For example, only search for objects traveling left and down in image.
> Time of day (hours, from/to)
- Useful when searching over several days and only wanting the results from a specific time of day, e.g. 6 a.m.
> Swaying objects (0-100 %)
- Filter out low interest objects and movements like swaying trees and lighting effects.
> Minimum time in scene (0-300 seconds)
- Filter out short-lived objects. Can also be used to find loitering behavior.
> Object width in image (0-100 %)
> Object height in image (0-100 %)
> Relative object speed in image (0-100 %/seconds)

Comparing existing XProtect motion search with AXIS Optimizer forensic search:

> XProtect Motion search:
- Primitive analytics based on pixel differences – prone to lighting changes and noise.
- Only one search result even if several objects are present in the scene at the same time.
- Limited filtering capabilities.
> AXIS Optimizer forensic search:
- Data to search on, object bounding boxes defined and we present what is an object.
- Visual overlays highlight found object and show how it travelled in a scene.
- More search filter attributes delivers faster and more accurate search
- Works with all Axis cameras with firmware 9.60

Requirements

> Milestone XProtect Corporate or Expert 2019 R3
> Axis Optimizer version 4.1
> Axis firmware 9.60 or later

Forensic search

1. Region of interest — Clear
Not set

2. Object direction — Clear
☐ To the right
☐ To the left
☐ Downwards
☐ Upwards

3. Time of day (h) — Clear
0   24
Invert

4. Minimum time in scene (s) — Clear
1   300

5. Swaying objects (% of image) — Clear
5   100

6. Object width (% of image) — Clear
0   100

7. Object height (% of image) — Clear
0   100

8. Relative object speed — Clear
0   100

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