A large electrical substation at night, illuminated by artificial lights. The structure is made of metal lattice towers and cross-arms, with various electrical components and insulators visible. The scene is viewed through a chain-link fence in the foreground.

Advances In Perimeter Security

Using Video Analytics to Mitigate Risks

Presenter: Anthony Hackett
Director, North America Sales – Senstar Inc

Agenda

- **Introductions**
- **Analytics History**
- **About Senstar**
- **Common Video Analytics Applications**
- **What's New?**
- **What's Next?**
- **Conclusions and Discussion**

History

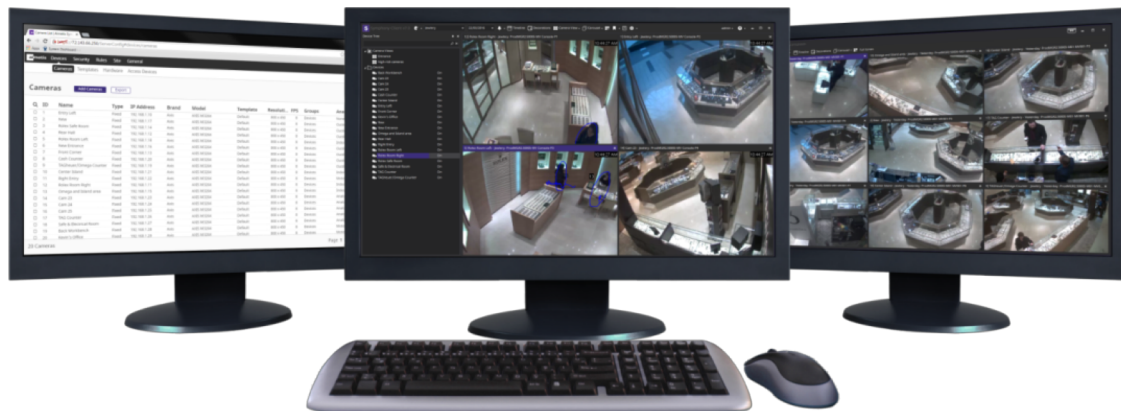


About Senstar

After amalgamating with Aimetis in 2016, Senstar is now a global leader in intelligent video management systems and video analytics. Parent company, Magal Security Systems, is NASDAQ-listed with a \$135M market cap.

Key facts:

- 15+ years experience in video management
- 35,000+ VMS deployments
- World-wide service and support
- Leader in intelligent video management solutions



Energy Customers



US Federal Government



Advances in Video Analytics



Common Analytics & Applications To Mitigate Risks

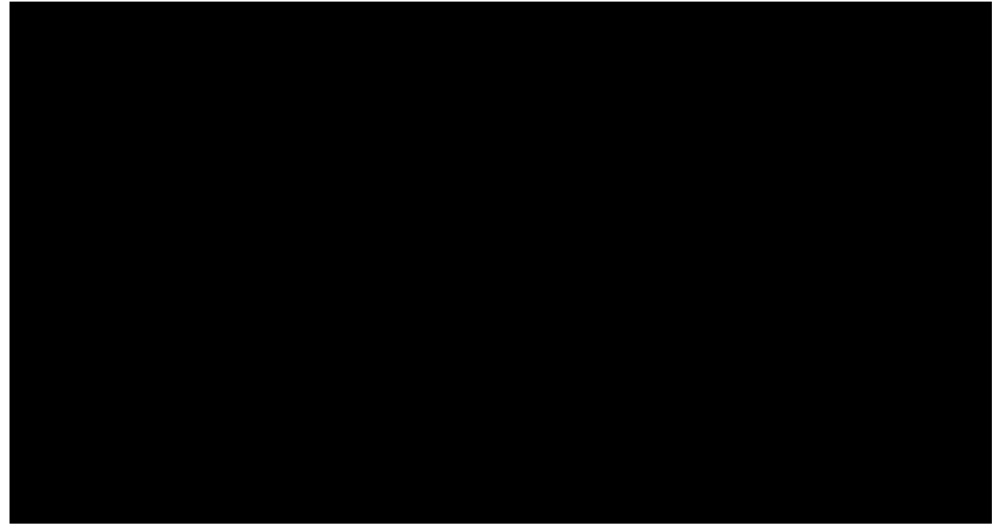
Analytic	Description	Applications
Cameras Tampering	Detects if the video has been compromised through obstructing the field of view or altering the position of the camera.	Detecting camera tampering.
Signal Loss	Detects if video input is one solid colour which may indicate signal loss. Only needed for cases where analog cameras are used with an encoder.	Detecting video loss.
Indoor People Tracking	Robust indoor people tracking. More reliable than VMD at eliminating shadows, small objects, reflections on floor, etc...	Tripwire, alarm zone, loitering, people counting.
Outdoor Tracking	Robust outdoor person and vehicle tracking in dynamic outdoor environments. More reliable than VMD at filtering weather, eliminating shadows, small objects, etc...	Tripwire, alarm zone, loitering, people counting.

Common Analytics & Applications

Analytic	Description	Applications
Auto-PTZ	Performs auto-PTZ tracking. Requires event trigger for initial object detection (e.g. Outdoor Tracking/VE180).	Auto-PTZ tracking as alarm trigger.
Left Item Detection	Detects left and removed items based on user defined minimum and maximum object size.	Detecting left or removed objects.
Crowd Detection	Real-time occupancy estimation for indoor and outdoor deployments.	Ideal for monitoring public spaces, event venues, and capacity restricted environments.
ALPR	Detects license plates.	License plate detection.
Face Recognition	A robust video analytic, ideally suited for securing facilities that require a stronger layer of protection for access control.	Two-factor authentication processes for access control, block lists in retail outlets and transportation hubs.

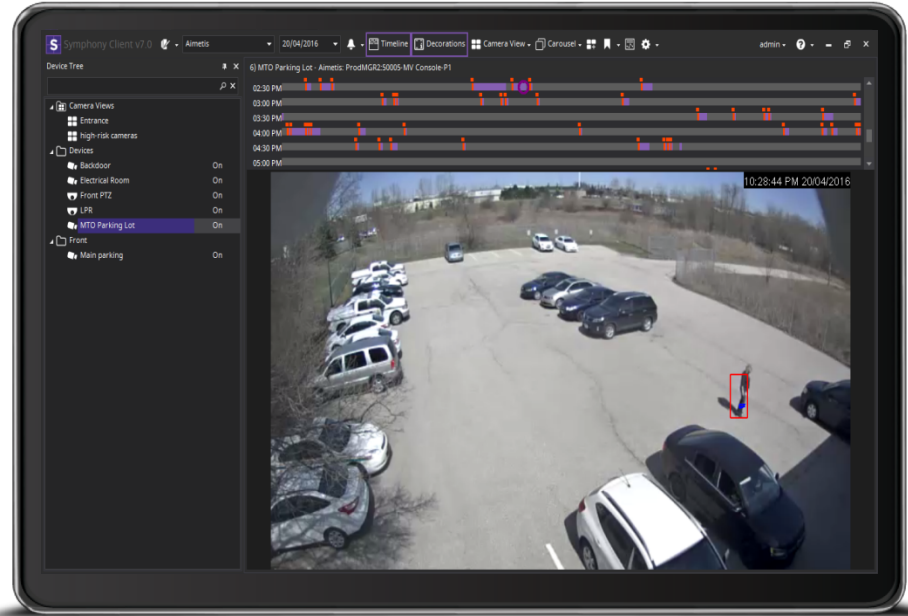
So What's New?

- Tools that enhance accuracy
 - Snow / Rain Removal
 - Various background models



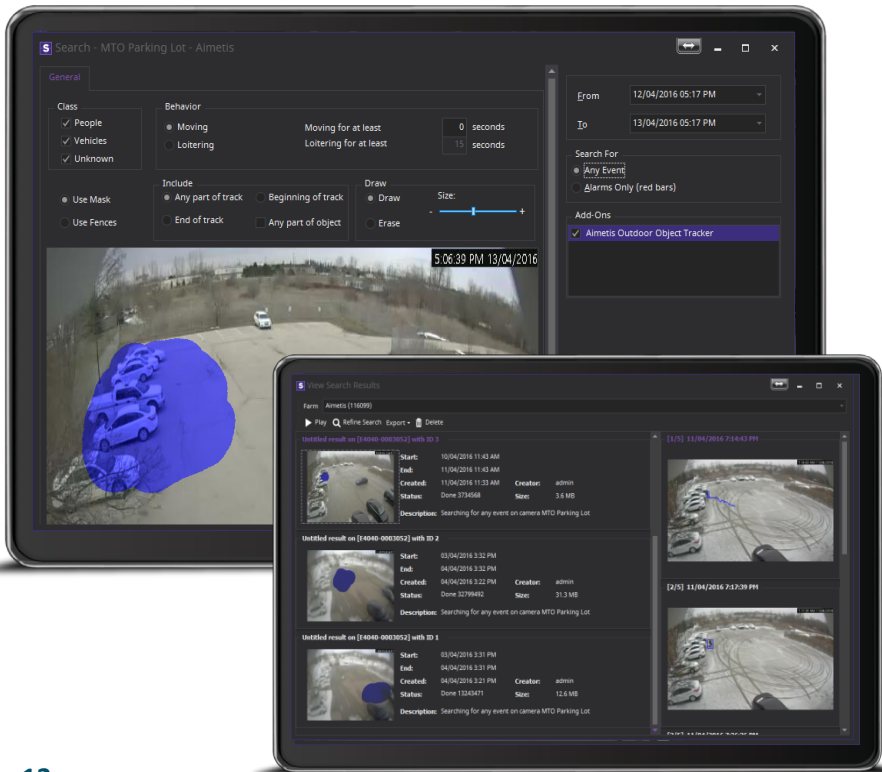
Powerful Search & Investigation

- Timeline indicates where interesting events occurred
- Timeline colors are customizable based on event type

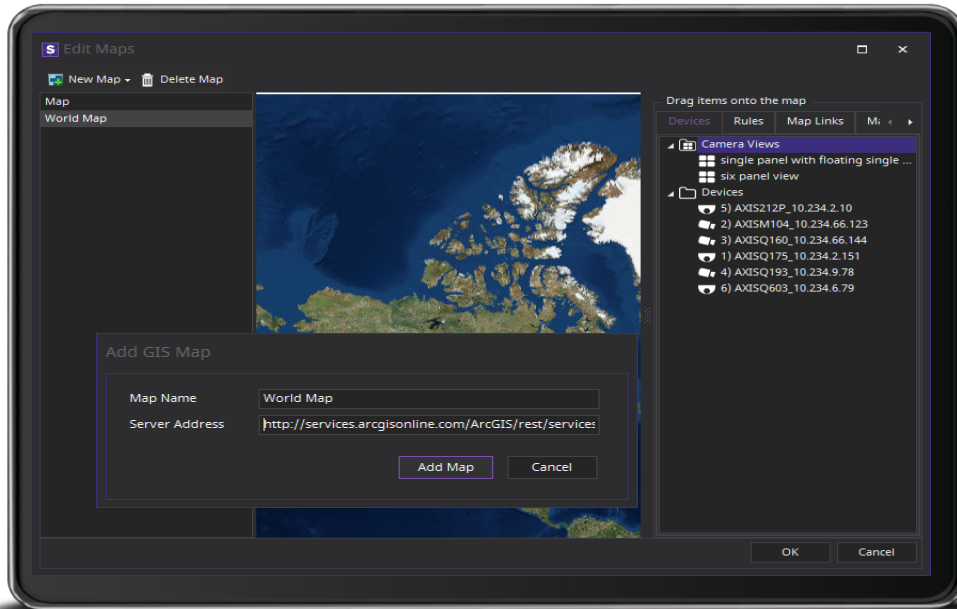


Powerful Search & Investigation

- Smart search will search meta-data and quickly find events
- Results are presented as thumbnails which can be played and exported

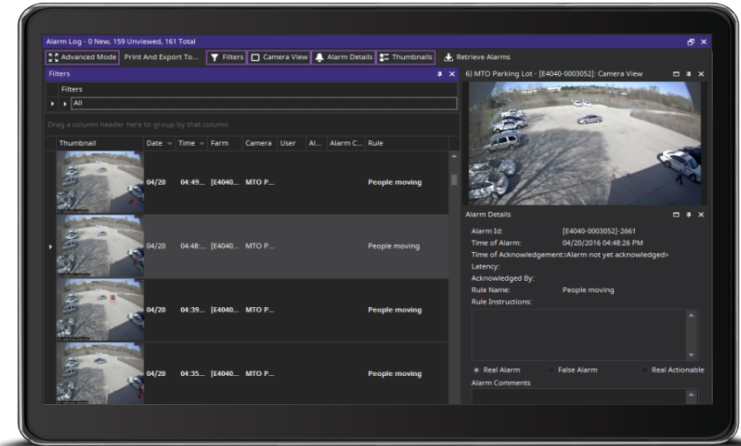
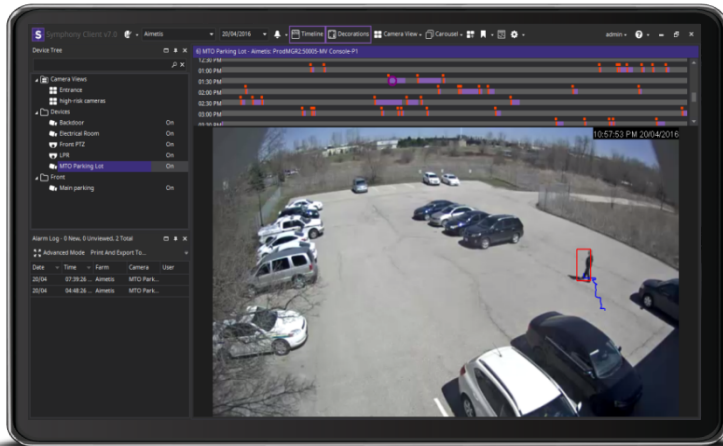


Situational Awareness



- Maps provide an overview of cameras and devices. Users can control gates, lights and other security devices
- Dynamic 3rd party GIS maps or internal (static) maps are supported

Alarm Management



- Alarms are centrally reported in client from multiple sources such as analytics or 3rd party sensor events
- Alarm Intelligence: Cut or Climb / Restricted Vehicle, gun shot location

Outdoor Person & Vehicle Detection

- Reliable outdoor detection which filters false alarms caused by environment
- Object classification includes person, vehicle & unknown

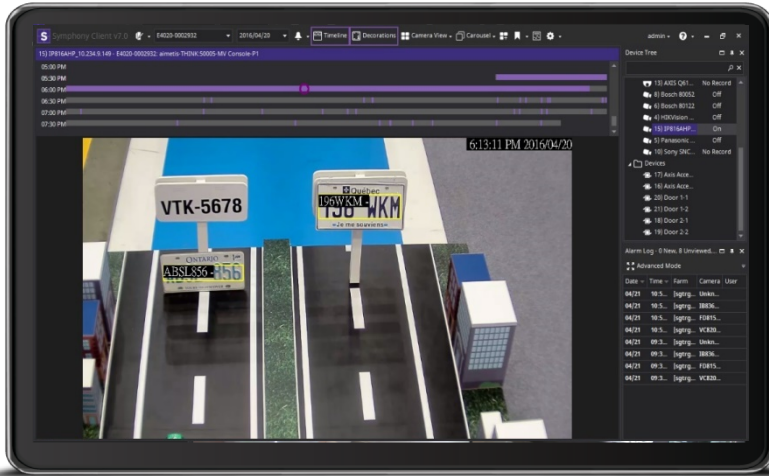


Auto-PTZ Tracking

- Reliable auto-tracking with any IP based absolute positioning camera
- Cameras are calibrated by system for optimal performance

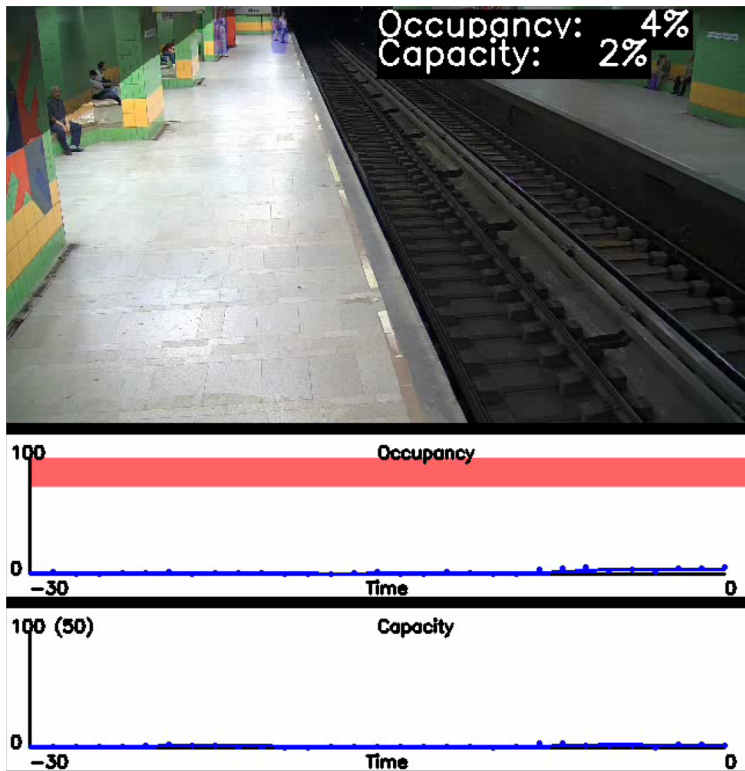


Automatic License Plate Recognition



- Reliably detect license plates from numerous regions around the world
- Search, alarm and report on detected plates

Crowd Detection



- Detect crowd formation and crowd disbursement
- Alarm on significant changes in flow



So What's Next?

Advances in Video Analytics



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29.797 FPS

8) LPR

0.98

Recording



The image features a dark teal background with a network of interconnected nodes and lines, representing a neural network. Several nodes are highlighted with a bright cyan glow. The text "YOLO v2" is centered in a large, white, stylized font.

YOLO v2

<http://pureddie.com/yolo>

Conclusions and discussion





Thank You

Anthony J. Hackett
ahackett@senstar.com