Advances In Perimeter Security
Using Video Analytics to Mitigate Risks

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Advances in Video Analytics

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

- conEdison
- New York Power Authority
- Exelon
- PSEG
- SOUTHERN COMPANY
- EPB
- SunEdison
- First Solar
SENSTAR SYMPHONY VMS AND VIDEO ANALYTICS

US Federal Government
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### Advances in Analytics

#### Common Analytics & Applications To Mitigate Risks

<table>
<thead>
<tr>
<th>Analytic</th>
<th>Description</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameras Tampering</td>
<td>Detects if the video has been compromised through obstructing the field of view or altering the position of the camera.</td>
<td>Detecting camera tampering.</td>
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<tr>
<td>Signal Loss</td>
<td>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.</td>
<td>Detecting video loss.</td>
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<tr>
<td>Indoor People Tracking</td>
<td>Robust indoor people tracking. More reliable than VMD at eliminating shadows, small objects, reflections on floor, etc...</td>
<td>Tripwire, alarm zone, loitering, people counting.</td>
</tr>
<tr>
<td>Outdoor Tracking</td>
<td>Robust outdoor person and vehicle tracking in dynamic outdoor environments. More reliable than VMD at filtering weather, eliminating shadows, small objects, etc...</td>
<td>Tripwire, alarm zone, loitering, people counting.</td>
</tr>
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<tr>
<td>Auto-PTZ</td>
<td>Performs auto-PTZ tracking. Requires event trigger for initial object detection (e.g. Outdoor Tracking/VE180).</td>
<td>Auto-PTZ tracking as alarm trigger.</td>
</tr>
<tr>
<td>Left Item Detection</td>
<td>Detects left and removed items based on user defined minimum and maximum object size.</td>
<td>Detecting left or removed objects.</td>
</tr>
<tr>
<td>Crowd Detection</td>
<td>Real-time occupancy estimation for indoor and outdoor deployments.</td>
<td>Ideal for monitoring public spaces, event venues, and capacity restricted environments.</td>
</tr>
<tr>
<td>ALPR</td>
<td>Detects license plates.</td>
<td>License plate detection.</td>
</tr>
<tr>
<td>Face Recognition</td>
<td>A robust video analytic, ideally suited for securing facilities that require a stronger layer of protection for access control.</td>
<td>Two-factor authentication processes for access control, block lists in retail outlets and transportation hubs.</td>
</tr>
</tbody>
</table>
So What’s New?

• Tools that enhance accuracy
  – Snow / Rain Removal
  – Various background models
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Powerful Search & Investigation

• Timeline indicates where interesting events occurred

• Timeline colors are customizable based on event type
Powerful Search & Investigation

- Smart search will search metadata and quickly find events
- Results are presented as thumbnails which can be played and exported
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.
• 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
• 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?

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Conclusions and discussion
Thank You

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