Improve surveillance through advanced analytics

HP's Video Surveillance solution for rail operators

Automatically analyze video footage

With thousands of surveillance cameras spread across most rail networks in the US, more and more rail safety officers are using video to detect events in real time to quickly investigate and pull together evidence for a case after the event. HP's video surveillance solution allows rail operators to easily integrate video footage from any source, and enrich it with automatic analysis. You can also search through footage for activity, objects, and events of interest, to reduce closure time after a security event. Line closures are estimated to cost rail operators over $800,000 per hour, making it essential to identify critical facts about an incident and reduce lost revenue.

Meet traditional challenges

• Searching through surveillance videos from police, public, and private cameras is a time-intensive, manual process

• Losing significant revenue due to network closure, as security events such as accidents are investigated for criminal intent

• Human concentration span limits the effectiveness of live human monitoring of CCTV cameras

• There is a potential to miss out on thousands of events on cameras that are not actively monitored

• Manual analysis sometimes limits the ability to connect the dots in an investigation

Improve overall surveillance operations

HP Surveillance for rail operators enables rail networks to easily reduce their revenue lost after an accident by streamlining the process that is traditionally handled by a person manually reviewing long CCTV videos while rail traffic is stopped waiting for clearance (e.g., determining if the event was a suicide or an accident). We can help you cut investigation time by an order of magnitude through the use of intelligent analytics. Our video analytics capabilities provide an easy way to detect objects and events in surveillance footage collected from any source.

Find activity of interest in long video footage
Now you can check when a person was present in a restricted area just by searching for a "person." The solution will return all the time instances when a person was present, which can then be reviewed for authorized or unauthorized access behavior. This typically reduces the review time for a 24-hour video to less than an hour.

Work with video from public CCTV sources and in impounded hard drives
Video fed from other sources like private CCTV cameras (e.g., retail stores, hotels around a rail station) can easily be ingested and time-synced with the rest of your CCTV footage for a complete overview of events in a given time frame, thus reducing overall investigative time.

Use tagged content as evidence in courts
We maintain the evidential trail, keeping all content secure and auditing any access. Whether the video is primary evidence, as with live streams, or secondary evidence, in the case of "bit for bit" ingested recordings, the strength of the evidence is maintained for court use.

Detect suspicious activity
HP's video analytics capabilities allow automatic detection and alerting on hundreds of different scenarios that rail safety officers might be interested in, but do not have the bandwidth to actively monitor. You can also detect suspicious activity and get real-time alerts from thousands of currently un-monitored cameras.

Key differentiators

• **Real world video analytics:** Battle-hardened analytics used by numerous military and intelligence agencies. We offer intelligent scene analysis, facial recognition, and audio analytics that work in the real world. Our algorithms automatically take care of issues such as illumination changes, foliage growth, bad transmission quality, and more.

• **Minimized false alerts:** While no real event should be missed, our technology can minimize false alerts with an easy to use and extremely flexible configuration tool to help analysts define what they are looking for, and a self-learning algorithm to further reduce false alerts over time.

• **Integrated search and analytics:** An easy to use search capability leverages the power of Autonomy IDOL to identify events.

• **Federated architecture:** Monitor and operate CCTV cameras and alarms at both local unit levels and at a centralized command center across multiple facilities.

• **Holistic situational awareness:** Automatic setup and alerting to events, with the ability to combine both structured and unstructured information for a more complete picture.

Key benefits

- Use hundreds of currently unmonitored cameras by detecting suspicious activity in real time.

- Augment human operators by allowing them to more efficiently monitor high security cameras for events.

- Cut investigation time by an order of magnitude through intelligent analytics.

- Increase revenue through increased customer satisfaction and a better understanding of rider demographics.

Detecting and identifying cars violating wig-wag lights on a rail crossing to reduce accidents

Improving rail safety with real-time detection and alerts of people crossing restricted areas such as rail tracks

Increase network safety

HP's surveillance solution can help detect issues such as tunnel entrance blockage and vehicles blocking rail crossings. You can also perform a range of surveillance activities on a number of areas, including:

- **Platform safety –** Unattended packages, people crossing tracks, people going off the end of a platform, unusual movement (running when everyone is walking), and overcrowding in a platform

- **Restricted areas –** Perimeter intrusion, secure zone breaches, tail-gating, facial recognition at entry and exit points, and Graffiti alerts

- **Entry/exit roads and parking lots –** Blocking emergency exits, stopped and abandoned vehicles, and parking violations

Increase revenue and improve operations through advanced analytics

HP's video analytics capabilities allow you to automatically detect and send alerts on hundreds of different scenarios. These capabilities allow you to get the most out of limited resources, freeing up staff that may not have the time available to dedicate to active monitoring.

- **Customer service –** Identify long queues at ticket counters or overcrowding in trains and platforms to optimize network frequency and design

- **Customer segmentation –** Understand demographics and age range of people using rail service to better target promotional campaigns

- **Ticket evaders –** Identify people jumping fences or ticket barriers

- **Traffic flow –** Understand how people flow through the stations at peak and non-peak times to improve flow and routing

Confront threats intelligently

Rail networks security officers need to gain a holistic view of events and threats around them. HP's Surveillance solution for rail operators provides the ability to correlate and analyze data gained from multiple sources to adopt an intelligent approach to security. Using this solution, rail security analysts can reduce time spent on investigating cases and increase effectiveness by improving detection of suspicious activities in real time.

About HP Autonomy

HP Autonomy is a global leader in software that processes human information, or unstructured data, including social media, email, video, audio, text and web pages, etc. Autonomy's powerful management and analytic tools for structured information together with its ability to extract meaning in real time from all forms of information, regardless of format, is a powerful tool for companies seeking to get the most out of their data. Autonomy's product portfolio helps power companies through enterprise search analytics, business process management and OEM operations. Autonomy also offers information governance solutions in areas such as eDiscovery, content management and compliance, as well as marketing solutions that help companies grow revenue, such as web content management, online marketing optimization and rich media management.

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