Autonomy Intelligent Scene Analysis System

We all know that CCTV systems work well only when individuals recognize and respond to the video surveillance images they see. Human error accounts for virtually all failures to respond appropriately to surveillance images. Issues may occur due to multiple duties, discontinuity in personnel, and failures in concentration and consciousness. There is an urgent need for technologies that allow organizations to proactively detect and accurately understand the significance of observed behaviors.

Autonomy Intelligent Scene Analysis System (ISAS), from HP Autonomy, enables security operators to focus on activities that truly require attention from a security professional. By anticipating and detecting potential threats or illegal actions—instantly and automatically—ISAS delivers comprehensive and highly effective video monitoring. It automatically tracks and identifies objects, analyzes motion for events, and extracts video intelligence from analog or digital video streams. The system can output analysis results in real time or archive them for retrospective video data mining.

Autonomy ISAS has been proven to dramatically increase the efficiency of surveillance operations by automatically detecting, analyzing, and interpreting all activity within view—enabling organizations to take preventative action against any security concerns. ISAS offers an impressive range of features and can be configured to identify the following as well as many other applications:

**Event detection activity** is identified from within the scene, and objects are identified and tracked. This information can be used in scenarios such as:

- Tripwire
- Zone detection
- Illegal traffic movement

**Object detector** continuously monitors an area to detect objects that have been left unattended for too long. It looks for objects that are not part of the “normal” scene and issues real-time alerts upon detecting exceptions. Suitable for identifying left luggage or illegally parked vehicles.

**Asset monitor/protector** continuously monitors an area to detect removal of assets/valuable property from the scene. It “learns” a scene and issues automatic real-time alerts when objects are removed from the scene.

**Categorization and counting** processes video streams in real time to classify identified objects such as people or vehicles and provide the ability to count said items. The system can perform continuous multi-directional counting of people and vehicular traffic in an area.

**Warning lights can be used in conjunction with object detectors** to monitor signal lights such as traffic lights or rail crossing signals. The color duration and sequence can form part of the requirement for any event to occur.
Training and configuration

HP Autonomy gives you the flexibility to set and refine your own definitions of what behavior could constitute a potential security threat and also define the precise action to be taken once a potential threat has been correctly identified. Your operators can train the system to recognize unusual behavior that may present a threat and establish multiple definitions for multiple scenes and locations within a complex, multi-camera environment.

iSAS supports a range of training methods, including non-alerting content, alerting content, simulating alerts, and alert verification. You can configure it to identify multiple categories of alarms within a scene at the same time, each with its own set of specified alert actions. The system performance model, once given user feedback, can be automatically configured to optimize operational or retrospective performance.

Moving camera platforms

Autonomy iSAS has the ability to understand video from cameras that are mounted on a moving platform. Whether this is vehicle-mounted, from a PTZ camera, or attached to an Aerostat kilometers above the ground, iSAS can extract information from the video to help monitor threats. Regardless of whether the background is stationary or not, objects are identified and tracked to alert on required behaviors.

The potential applications for the iSAS system are incredibly far-reaching. Following are several potential uses:

**Airports:** Airports require a wide range of intelligent video capabilities to detect exception conditions and allow airport and security personnel to improve security. iSAS identifies suspect behavior such as loitering and can monitor planes and service vehicles while on the ground.

**Retail Stores:** Retail stores need compelling business intelligence that can be used for improved customer service, marketing, and customer analysis. In addition, they also need capabilities to increase safety and security for their customers and employees. In this context, iSAS delivers business intelligence and customer analysis, queue management and customer service, safety, security and loss prevention, as well as face detection/recording.

**Traffic Systems:** Intelligent traffic systems monitor and secure freeways/highways, busy intersections, bridges, tunnels, and railway crossings. iSAS provides the full range of capabilities in the transportation sector to improve traffic flow and safety, including traffic analysis, vehicle count, speed checks, automatic traffic reports and congestions, and vehicle parking violations.

**Surveillance:** Agencies requiring 24x7 surveillance of “subjects of interest” amass a huge amount of video data very quickly. iSAS is used to identify salient activity within the video, thus reducing the time required by highly valued analysts. When also combined with our License plate and Face recognition technologies, it provides a powerful tool.
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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