

Smart Surveillance

Next generation surveillance and operations command



Introduction

Faced with increasingly complex threats from global terrorism, security agencies must strengthen their ability to react rapidly to critical situations. They need to constantly stay ahead of aggressors and collaborate at multiple levels across local and international government agencies to combat crimes and support dynamic surveillance operations.

Smart Surveillance leverages intellectual property (IP) built by NCS, IntelliSURF™ to enable a unified surveillance and operations command platform to improve vigilance in public places and strengthen security responses. This strong analytics-centric platform can enhance investigation efficiency as it allows multi-purpose application of different video analytics functions (e.g. crowd information, facial recognition and vehicle licence plate recognition) and integration of data from existing and future systems. Such capability and potential to integrate structured and unstructured data is a core prerequisite for in-depth correlation analysis.

Challenges

- Legacy camera system - low resolution and records in different format.
- Narrow FOV - Resultant in installation of many cameras, increases in overall cost.
- Overwhelmed with video streams to monitor, resulting in inefficiency of operations
- Records in different video standards and resolution

Solutions

A next generation surveillance and operation command platform, the features include:

- High resolution panoramic camera with built-in pan-tilt-zoom (PTZ) capabilities
- Wide Dynamic Range to ensure excellent images across wide range of lighting conditions
- Edge analysis for Facial Recognition(FR) and human crowd analytics
- Video Management System (VMS) with Video Integration Gateway (VIG) for connecting disparate video systems
- IntelliSURF™ – Open platform for fusion of multiple data sources

A future-proof system that can support dynamic operations through the use of a unified surveillance and operations command platform, IntelliSURF™ is a strong analytics-centric platform that allows multi-purpose application of different video analytics functions. It is capable of integrating structured and unstructured data for in-depth correlation analysis to support intelligence and investigation led operations. Interoperable in nature, the platform allows for

future integration of safety and security solutions to achieve more comprehensive situational awareness and enable actionable intelligence.

The system used front end sensor, such as ultra-high resolution panoramic cameras and PTZ cameras are deployed at strategic location. Video captured are ingested in real-time by Video analytics system which analysis the video for Facial Recognition (FR), with human crowd behavior analysis such as aggregation, dispersion and aggression detection.

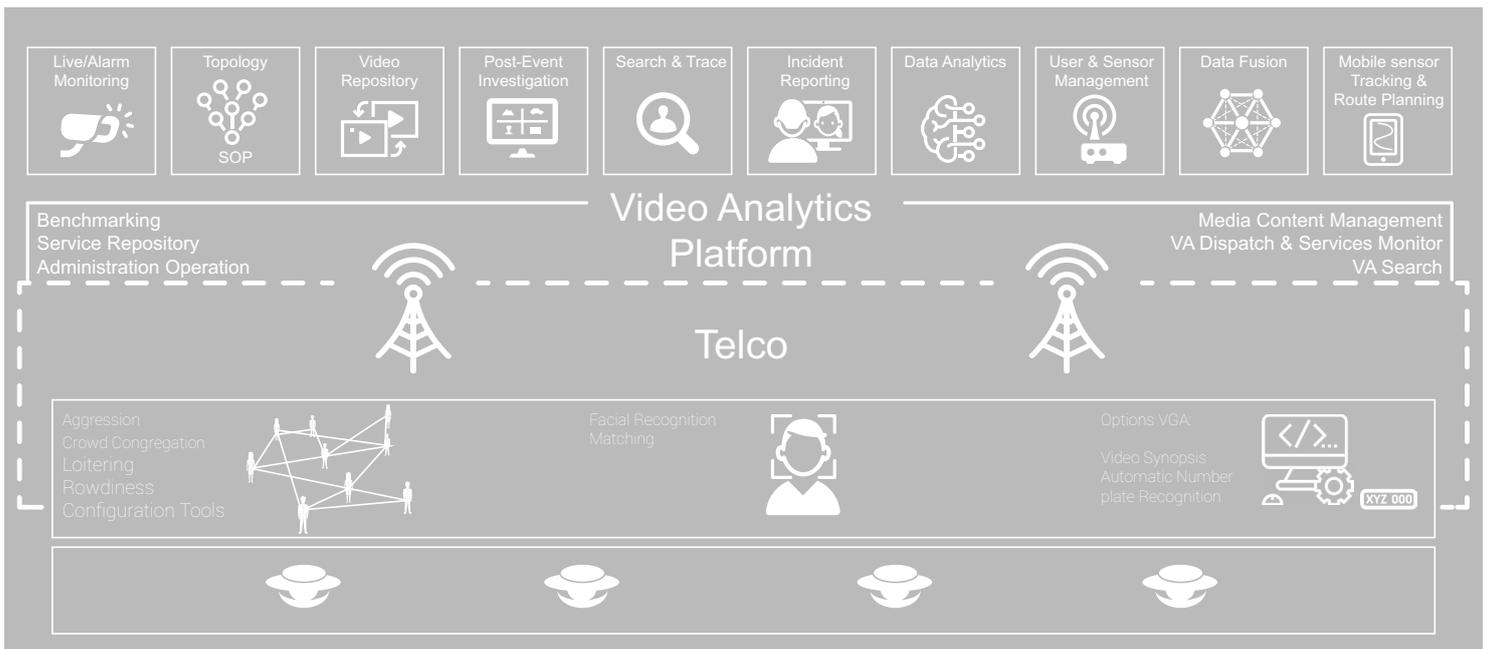
When an event occurs, data from the external systems such as video content analysis (VCAs), sensors, are received by IntelliSURF™, the data will be translated into a common format for storage and processing by the Complex Event Processing (CEP) engine according to the configured event processing rule (such as event filtering, consolidation, calculation, process using data from external data source etc.). After processing, the alerts, actionable insights, workflow would be visualised on the IntelliSURF™ dashboard. Operators would then be able to perform function such as event/alarm/situation search, situation management and response, dashboard, GIS visualisation of cameras.

The introduction of Video Analytics Platform further expands the system. As it allows integration of 3rd party video analytics to the system.

Benefits

- Ingest data from a wide range of sources (video, sensor, geospatial, social media, corporate information systems, etc.)
- Complex sensing of events in real time to trigger and disseminated alerts through various channels
- Synthesise information to detect evolving situations, and to visualise them through a unified dashboard to provide real-time situation awareness
- Increase operational efficiency through automated responses with standard operating procedures, notification and collaboration tools

Empower surveillance team with information and insights.



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