Do Your Analytics Talk To Each Other?

Scalable Media BUS
Integrate various sensors and analytic engines for situation awareness

With a lack of a coordinated approach in processing a flood of data, the thousands of surveillance cameras and sensors, along with various types of analytic engines, deployed in many parts of the world threaten to end up as disparate systems and silos of information unable to cater to the urgent needs of an emergency or crisis.

The Challenge
Today, customers in the area of urban surveillance are facing challenges such as increased surveillance coverage, reduced field forces and operators, unreliable analytic systems, increased cost in maintenance, scalability of system and interoperability issues.

Traditional surveillance systems are not designed with scalability in mind. Though sensors can be deployed in numbers, many of these systems do not scale efficiently with the number of sensors, heterogeneity of sensors and analytic engines and application use-cases. More importantly, they do not interoperable with external sub-systems such as video management system or analytic engines.

Member of MAG1C® Suite (Multi Agencies, One Concert)

The Solution

NEC's Scalable Media BUS (aka MAG1C BUS) is designed to tackle these challenges. It is an open and scalable platform, integrating heterogeneous systems such as camera, acoustic microphone, video management system, analytic engines and video content analytic engines. The key design principles of MAG1C BUS are as follows:

Flexibility

MAG1C BUS provides a platform to orchestrate the various analytic engines and processes in place. Depending on the use cases, customers can deploy pre-configured pipelines which can consist of systems such as facial recognition, license plate recognition or video content analytics. The goal here is to subject a single video feed to various pipelines of analytics.

Interoperability

MAG1C BUS is interoperable with external systems through a software development kit (SDK). This enables customers to leverage on their existing systems or any 3rd-party systems that meet their requirements to fulfil the application-specific use-cases.

Scalability

MAG1C BUS is designed with horizontal and vertical scalability in mind, to support more cameras, and diverse source throughput with high resolution and frame rate and analytic engines.

Unique Features

MAG1C® BUS uses an open platform middleware which allows easy transmission and formatting of data from popular makes of sensors to a central system.

Intelligence gleaned from the data is displayed on a web front-end for users via an XML format, allowing for faster and better decision making.

Analytic engines that can be plugged into the system include but not limited to:

Face recognition software and audio sensors detecting cries for help or coughing

Human behavior monitoring system for detection of abandon object, loitering

PLATE NUMBER

Vehicle tracking or identifying of license plates

Compatible with major camera types (e.g. Avigilon, Axis, Bosch, Panasonic and Sanyo).

Benefits

- Enormous savings on limited resources. By bringing their own plug-ins, users can maximize the use of their existing sensors while integrating future ones.
- More accurate and reliable results through combining analysis of multiple engines.
- Open platform middleware allows many types of inputs (Many-to-Many) to be connected.
- The use of open platform prevents undesired vendor lock-in for the user.
- Provides ample room for scalability and development of own resources.

Applications

- Urban Surveillance
- Corrective Facilities
- Eldercare Homes
- Transportation and Traffic Management
- Critical infrastructure