

## **TN0501E VCASYS summary of features.doc**

Applies to: NVC/IPE/UDP PC Capture cards with VCA function enabled

Level: Public

# **Summary**

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This document guides you on what is, and what is not included in the two versions of VCAsys, VCApresence and VCAsurveillance and also covers on how to interface with the custom software.

## **Detailed Information**

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The high performance of VCApresence and VCAsurveillance is due to the underlying high quality tracker. It results in a much lower false alarm rate and higher detection rate than many other video Analytics systems.

### GENERAL

- High performance, comparable with the best in the industry
- Quick and easy to use – intuitive graphical interface (also no algorithm parameters to confuse users)
- Realistic OEM prices

### TRACKER:

High-end VCAsys tracker.

- Tracks up to 100 targets simultaneously.
- Up to 40 general purpose, user-defined, polygonal detection zones
- Camera shake cancellation – tracker works even though the camera is on a swaying pole
- Tracks objects when they stop or move very slowly
- Continues to track objects which pass each other, ensuring that the trail is continuous and unbroken.
- Continues tracking when objects are partially or completely obscured temporarily
- Ignores changes in light due to clouds and switching on artificial lights or camera auto-iris operation
- Ignores repetitive movement – waving trees, rippling water
- Ignores cloud shadows passing across the ground

- Ignores video interference and missing video frames
- Adjusts to image degradation caused by rain, fog, dirty camera lens and low sun position causing dazzle
- Does not false alarm due to PTZ camera movement.
- Tracks objects on 100% of screen area (except in any non-detection zones defined by the user)
- Includes on-screen Annotation Metadata – draws drawing bounding boxes and object trails. Highlights alarmed and non-alarmed objects in different colours

#### VCAPRESENCE FEATURES

1. Includes VCAsys tracker
2. The Presence filter detects when an object such as a person or vehicle is inside or is crossing a zone or a line
3. Camera attack detection: detects moving, defocusing or covering of the camera. It does not respond to slow changes such as build-up of dirt on the camera lens or natural variations in daylight levels. (in next release)
4. Detection zones are polygonal with variable number of vertices so that any shape can be supported.
5. Detection zone can also be a line, which can have one or many segments
6. Includes non-detection zones for masking possible sources of false alarms
7. Fast moving objects are detected even if they pass through the zone or line quickly

#### VCASURVEILLANCE FEATURES

1. Includes all features of VCApresence
2. Up to 40 On-screen counters linked to the detection rules
3. Direction filter with independent adjustment of direction and acceptance angle
4. Stopping filter – with variable time threshold
5. Dwell filter – with variable time threshold, used for detecting loitering people, etc.
6. Enter and Exit filters
7. Appear and Disappear filters
8. Unique, easy to use, 3D calibration suitable for overhead and side-viewing cameras. Calibration in metric or imperial units

9. On-screen display of object classification, speed, area and height.
10. Speed filter with upper and lower speed thresholds
11. Filter on object class - for example people, group of people, vehicle, clutter, etc..
12. Filter out small animals, birds and blowing trash by excluding objects in the clutter category
13. Object classes can be changed by the user
14. Combined filter using object class and one other filter
15. Includes full Forensic Metadata stream in XML format for customer use.
16. Abandoned object and removed object (in next release)

#### INTERFACES

- Web browser interface gives complete access to all the features of the Analytics package.
- Real-time on-screen annotation of the object tracking and segmentation bitmap (blobs) gives information about the operation of the VCA.
- All configuration and control is done by the HTTP API.
- VCA event causes digital output contact, email or API message
- API includes event messages detailing the bounding box, trail, rule, zone, time and event ID of alarms
- Metadata is in the form of an XML data stream

## Revision History

Revision	Date	Description
A	2009-05-21	Created. (Reference Document : vca00101app009_0.1 - VCA Summary of Features.doc)