This Specification Sheet gives the details of system requirements, feature details and other salient points of AllGoVision’s Traffic Management Features.

Revision Date: January, 2017
INTRODUCTION

AllGoVision is a Video Analytics software product for actionable intelligence for safety, security and business analytics. The product provides excellent return on investment for a wide range of applications, including City & Traffic Surveillance, Intelligent Traffic System (ITS), Parking Management and many more. The product analyzes rapidly the video for specific data, behavior patterns, tracking movement of objects including people and vehicles in the monitoring zones.

ILLEGAL PARKING DETECTION

This Data sheet gives the details of system requirements, description of features and other technical details for AllGoVision’s Illegal Parking Detection feature.

The solution is applied for detecting vehicles parking / stopping in an unauthorized manner (in a restricted area and/or beyond a defined duration) in front of entry/exits malls, offices, building lobbies or in city & traffic surveillance (city roads and even on highways).

Accident detection can be another secondary usage through this feature when any vehicle stopped at the middle of the road due to accident can be detected by video analytics and can be alerted for.

SYSTEM REQUIREMENT

AllGoVision analytics has the following system hardware and software requirements.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Window 7, 8, 10</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel i7, RAM 16 GB for 4 channels</td>
</tr>
<tr>
<td></td>
<td>Intel 12 Core Xeon, RAM 32 GB for 12 channels</td>
</tr>
<tr>
<td>Network</td>
<td>Ethernet, 100 Mbit or higher recommended</td>
</tr>
<tr>
<td>Hard Disk Space</td>
<td>50 GB for 1 week storage of alarm files (images &amp; videos)</td>
</tr>
<tr>
<td>Database</td>
<td>MySQL 5.5.2</td>
</tr>
<tr>
<td>Resolution &amp; Frame Rate</td>
<td>320x240 and above up to 1080p. Frame rate: 10 fps and above</td>
</tr>
<tr>
<td>Stand Alone version camera support</td>
<td>Axis, Pelco, Bosch, Hikvision, Honeywell, IQinvision, Sony, Dahua, ISD,</td>
</tr>
<tr>
<td>(Works with/without VMS)</td>
<td>Panasonic, Brickcom, ArecontVision, Indigovision, Cisco, Samsung, Acti,</td>
</tr>
<tr>
<td></td>
<td>Vision, Digital Watchdog, and others (ONVIF Cameras)</td>
</tr>
<tr>
<td>VMS Support</td>
<td>Milestone, Genetec, IndigoVision, exacqVision, Cisco, Honeywell, DW,</td>
</tr>
<tr>
<td></td>
<td>Wavestore</td>
</tr>
<tr>
<td></td>
<td>Note: With VMS all cameras supported by VMS will be supported</td>
</tr>
</tbody>
</table>
ALLGOVISION VIDEO ANALYTICS

The AllGoVision Analytics is robust to weather changes, lighting changes, tree swaying and other background distractions. AllGoVision also works well in crowding conditions. The AllGoVision supports object classification.

The software is easy to install and simple to use with intuitive GUI. AllGoVision also supports customization through variation of features for specific applications. AllGoVision supports distributed architecture. Following are the salient features and options supported in AllGoVision.

- Administrator Login
- Scheduler to enable scheduling of Analytics
- Failover server
- ONVIF streaming of analytics overlaid video, video stabilization
- Alarm video creation and Snapshot creation
- False Alarm Minimization
- Direct Camera Connection
- Option to run the Application as a Windows Service
- Save, Export and Restore options for Analytics Settings of each Camera
- Metadata Storage & Search for object’s Type, Time, Color, Size, Speed and Aspect Ratio
- Logical operation on Alarms
- Both Server based and Edge based (on camera) analytics capabilities
- Multi-region Analytics on a single frame (alerts for multiple features/regions simultaneously)
- Options for Naming & Priority Settings for the regions.
- AllGoVision has its own alarm management client Alarm Center, providing below features:
  - Provides real time alarm snapshot and video. The database requirement is MySQL.
  - View / Search / Reporting & Analysis options for AllGoVision’s video analytics alarms
  - Options for alarm Pop-up, Preview, Playback, Thumbnail view & Video Summary
  - Alarms filters based on object properties – time, type, color, size, speed & aspect ratio
  - Live View option for video wall and Live Reporting options
  - Provides search capability for Forensic Search based on metadata / object properties.
  - Supports Parking Management Client.
CAMERA INSTALLATION

Cameras should be installed at a height of about 30 feet focusing towards the road as illustrated:

Camera Setup Option 1 - for Illegal Parking Detection

Angular Cameras,
Height of Installation = 30 feet
Cameras installation parallel to the road
Moving traffic (no-congestion) scenario.

Camera Setup Option 2 - for Illegal Parking Detection

Angular Camera / Overhead Cameras
Height of Installation = 30 feet
Cameras installed from a bridge over the road
Moving traffic (no-congestion) scenario.

Camera Setup Option 3 - for Illegal Parking Detection

Angular Cameras
Height of Installation = 30 feet
Cameras installed along the road.
Moving traffic (no-congestion) scenario.
DESCRIPTION OF THE FEATURE

AllGoVision has an advanced algorithm to detect illegal parking event effectively in the monitoring zone which is under surveillance by IP Cameras. It detects parking or stopping of any vehicle in a specified virtual area in the camera field of view (no parking zone or restricted zone as per the authority) beyond a specified period.

Following are salient points with respect to this video analytics capability:

- Works fine even in challenging environment with continuous and busy traffic
- Equally effective in city roads as well as highways
- Detects vehicle stoppage in an undesired or restricted zone
- User can mask part of the area for no alarm for stoppage in the same camera view
- Detects vehicle stoppage for longer duration than permissible time limits
- User can specify the time limit which can range from few seconds to several minutes
- Detects accidents by identifying stoppage of vehicle at the middle of the road / highway
- Can be integrated with license plate recognition feature to identify vehicle by their captured and recognized license plate along with the image of the violating vehicle
- Can detect illegal parking in any camera angle. Therefore, the normal surveillance cameras can be used for monitoring as well as detection of illegal parking in those areas.

Other Features for Vehicle Analytics used in Intelligent Traffic Surveillance (ITS)

- Vehicle - Wrong Way Detection
- Vehicle - Speeding Detection
- Vehicle - Congestion Detection
- Vehicle - Tailgating Detection
- Vehicle - Counting
- Vehicle - Parking Management (Parking Availability Detection)
- Vehicle - License Plate Recognition*

*Supported in specific countries
INTEGRATION

AllGoVision Video Analytics application is available in 2 flavours:

With VMS:
- AllGoVision application is based on Open Platform Standards.
- It is integrated with many open platform VMS.

Without VMS:
- It is a standalone application.
- It works independent of VMS.
- Directly takes the video feed from camera.

Architecture

Simple architecture schematics for with VMS and without VMS (Standalone) schemes are shown below. AllGoVision takes the video feed either from VMS or camera and processes in the AllGoVision video analytics server. The alarms can be viewed either in VMS Viewer (VMS Client) or in the Alarm Center (AllGoVision’s Alarm Management Client).
Federated Architecture

- With Federated Architecture, analytics can be done at local servers and viewed by local operators.
- A central server with a central operator can view all the alarms in the system.
- Alarms from different clients can be seen at the central Alarm Center and alarms are differentiated through Client IDs.

ALLGOVISION GUI

AllGoVision product offers a graphical user interface with windows-oriented, tab based, point and pick interface. Extensive use of graphical icons, pull-down menus, buttons, check boxes, and radio-buttons are incorporated to reduce typing work to the minimum possible extent.

AllGoVision product GUI consists of following seven tabs:

Server Setup Tab

The server setup tab consists of VMS or camera settings and other field details. You are able to view the video details from camera.
Analytics Setup Tab

The Analytics setup tab gives options to set the analytics fields for different features.

Advanced Setup Tab

This tab gives options to select advanced settings like camera environment, analytics processing complexity, shadow removal sensitivity, camera view, predefined object size and minimum object size.

Trigger Based

This allows running analytics from trigger like that from RFID.

Report Tab

This tab gives option to plot the statistics of counting applications. Both line and bar charts are possible. This also has auto e-mailer and export of plots and report.

AllGoVision GUI – Analytics Setup Tab
### Illegal Parking Alarms in Alarm Center

<table>
<thead>
<tr>
<th>AlarmID</th>
<th>TimeStamp</th>
<th>AlarmName</th>
<th>AlarmDescription</th>
<th>CameraName</th>
<th>SourceLocation</th>
<th>ObjectType</th>
<th>ObjectColor</th>
<th>ObjectSize</th>
<th>RegionName</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>309</td>
<td>10-03-2015 16:49</td>
<td>ILLEGAL PARKING</td>
<td>VEHICLE</td>
<td>Camera 2</td>
<td>Entrance</td>
<td>Unidentified</td>
<td>Unidentified</td>
<td>Medium</td>
<td>Entry</td>
<td>VERY_LOW</td>
</tr>
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<td>319</td>
<td>10-03-2015 16:49</td>
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**Alarm Preview**

**Alarm Popup**

10-03-2015 16:49  ILLEGAL PARKING  CAMERA 1  ENTRY  VEHICLE