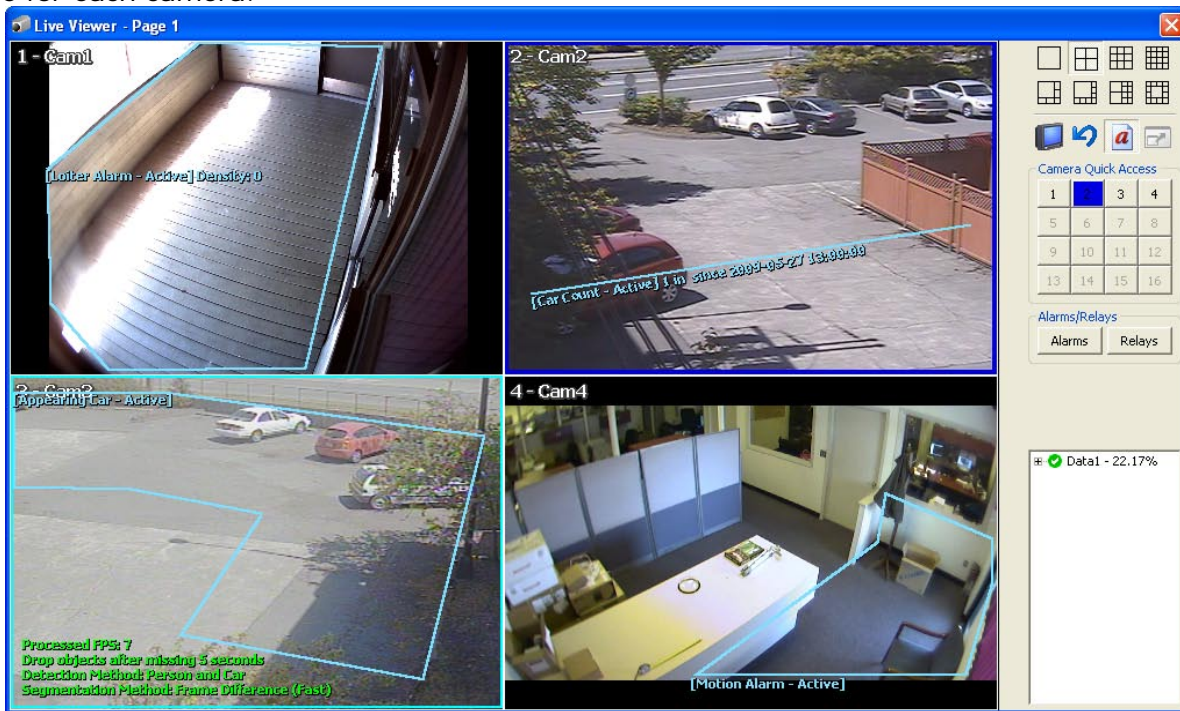


# 1 Vigil Server Video Analytics Quick Guide

## 1.1.1 Video Analytics Tab

The *Video Analytics* settings of Vigil Server allow monitoring and tracking of object movement within the video. Each individually configurable *Analytics* rule type monitors objects in a different way. Each rule can be set to trigger an alarm based on criteria specified by the user. Video analytics rules can be configured to use a variety of alarm notifications such as sending an e-mail, triggering a relay output, or sending a notification to a Vigil Client station.

Below is a snapshot of the Live Viewer with four types of video analytics rules configured, one for each camera.



### 1.1.1.1 Video Analytics Calibration

Before rules may be added and configured, the video analytics must be calibrated for each camera to ensure the proper detection and tracking of objects.



Opens the *Calibration* window where analytics are calibrated for the selected camera. Proper calibration is a critical step to achieving accurate analytics results.

#### 1.1.1.1.1 General

To reduce CPU usage, Vigil Server reduces the resolution of the image used for *Analytics* calculations. It is strongly recommended that the *Max Kernel Resolution* be set to CIF. Increasing the *Max Kernel Resolution* setting will only affect camera views with extremely wide camera angles where objects are small enough that they are lost when the resolution is reduced to 352 x 240.

Values available:

CIF – 352 x 240 (recommended)

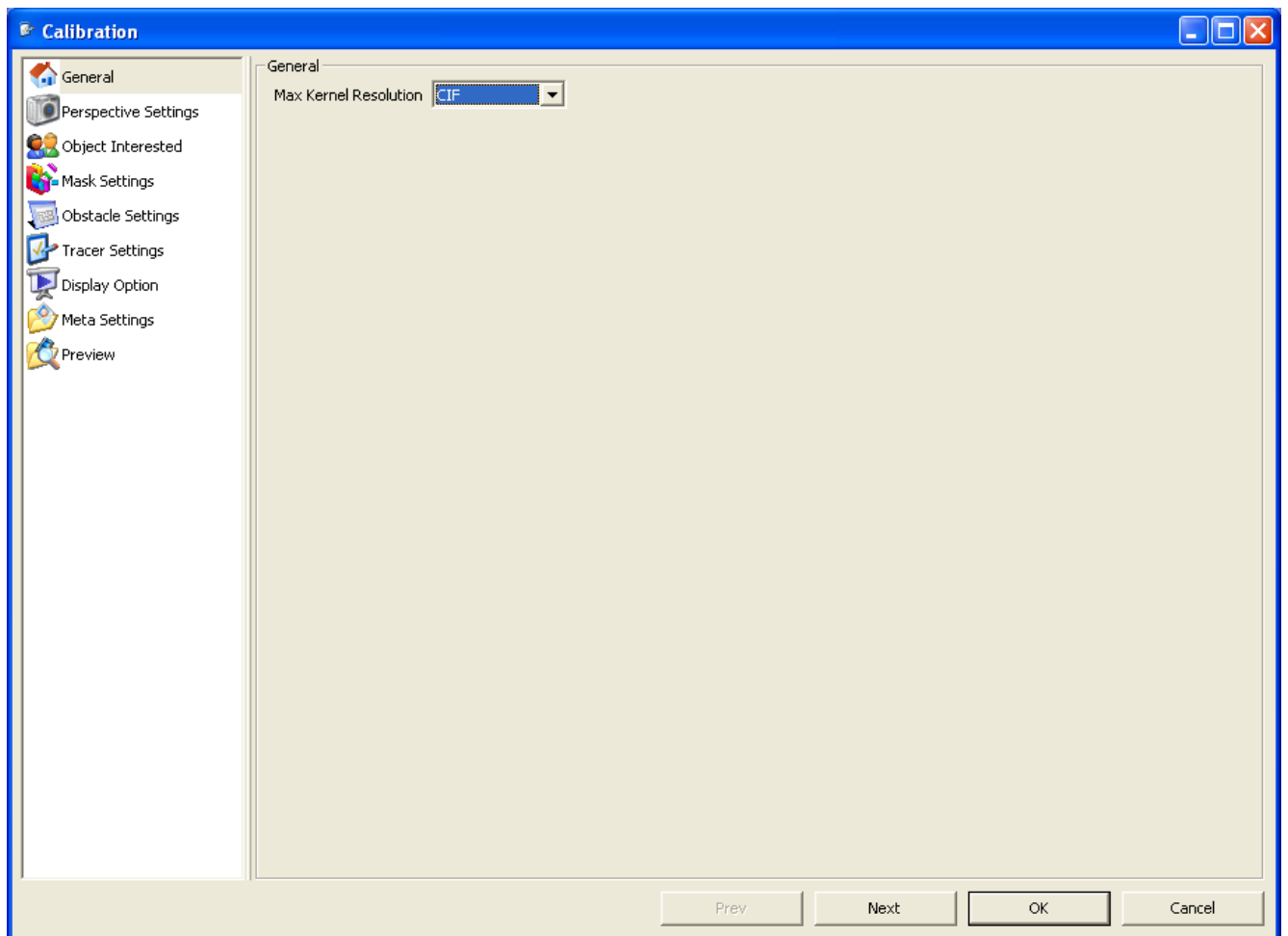
4CIF – 704 x 480

Megapixel – 1280 x 1024

Full Resolution – Full resolution recorded from the camera

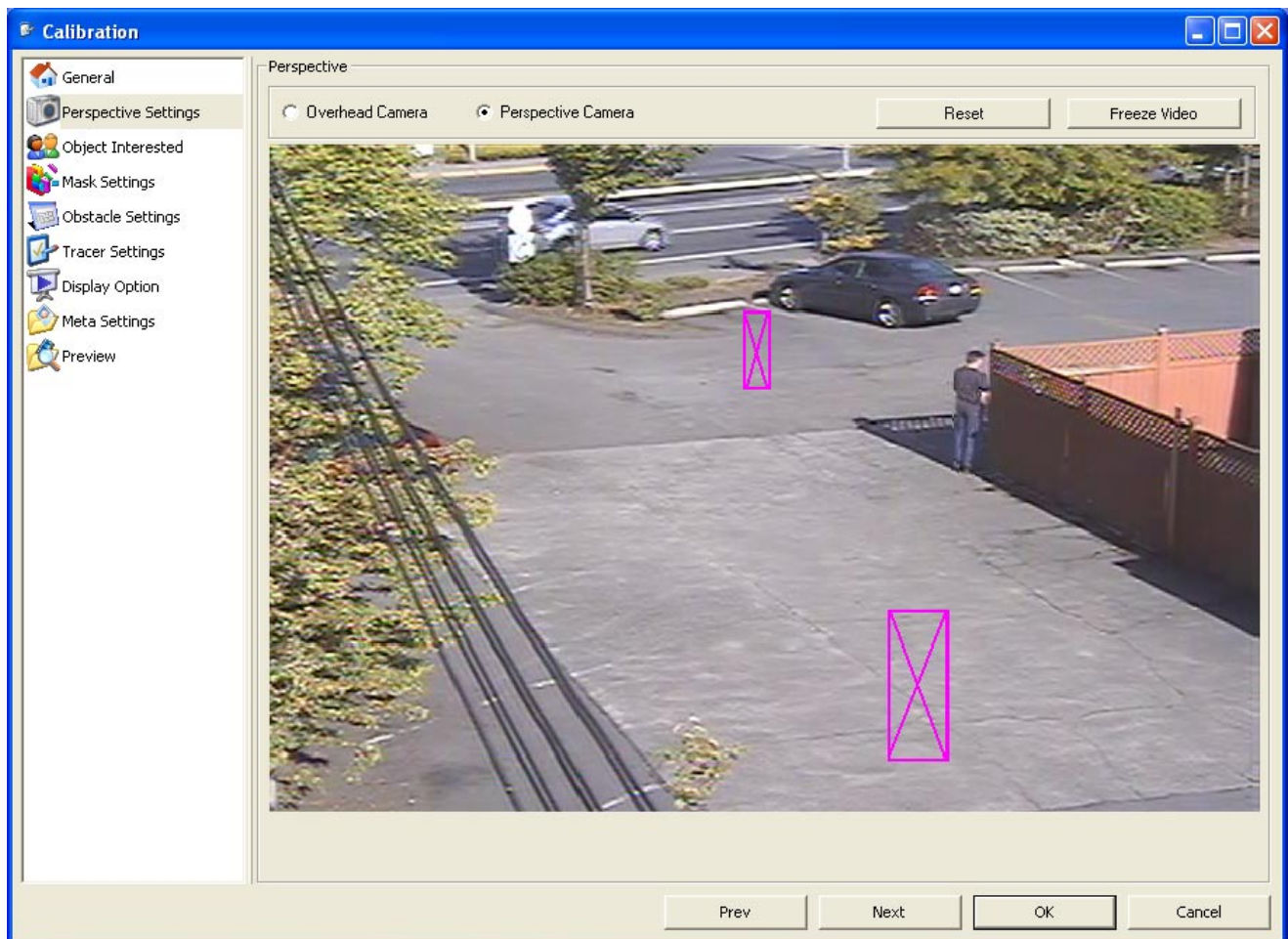


**Warning:** Increasing the Max Kernel Resolution will result in increased CPU usage. Please monitor the CPU usage closely.



### 1.1.1.1.2 Perspective Settings

Select Overhead Camera if the camera view is pointed straight down. Select Perspective Camera if the camera is at an angle. Set the person size box carefully; the accuracy of the person size box will directly affect the accuracy of analytics rules.

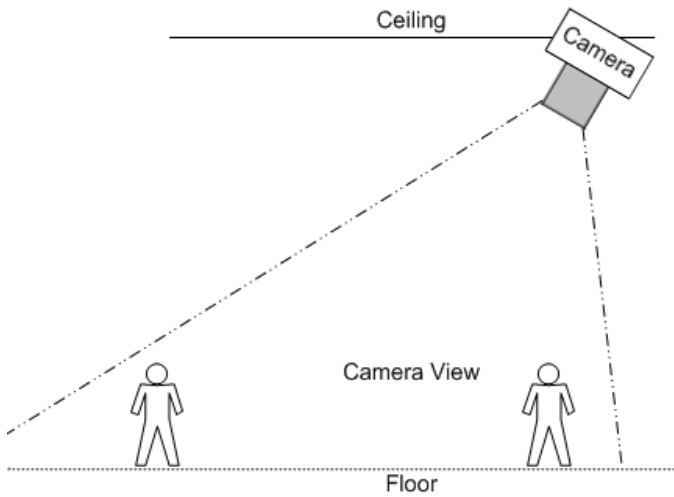
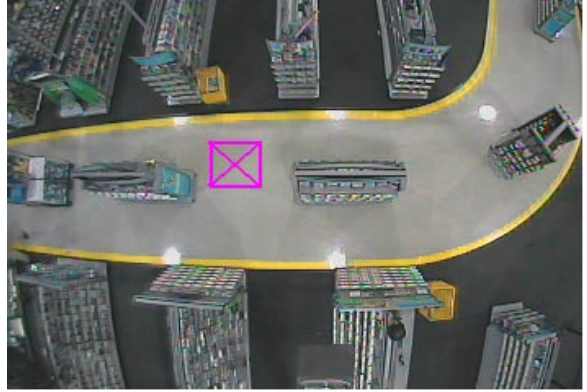
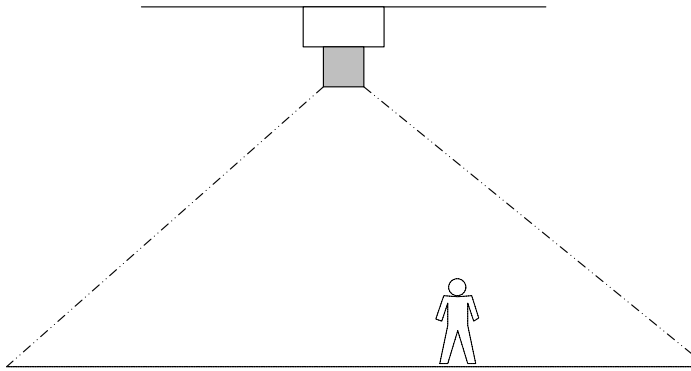


**Reset:** Click the *Reset* button to set all person sizes to default. The person size boxes must be accurately configured for the analytics rules to function properly.

**Freeze Video:** When a person is standing in the ideal location, click the *Freeze Video* button to stop the live feed so that the person size rectangle can be adjusted to an accurate size. Click the *Freeze Video* button again to return to live video.

**Overhead Cameras:**

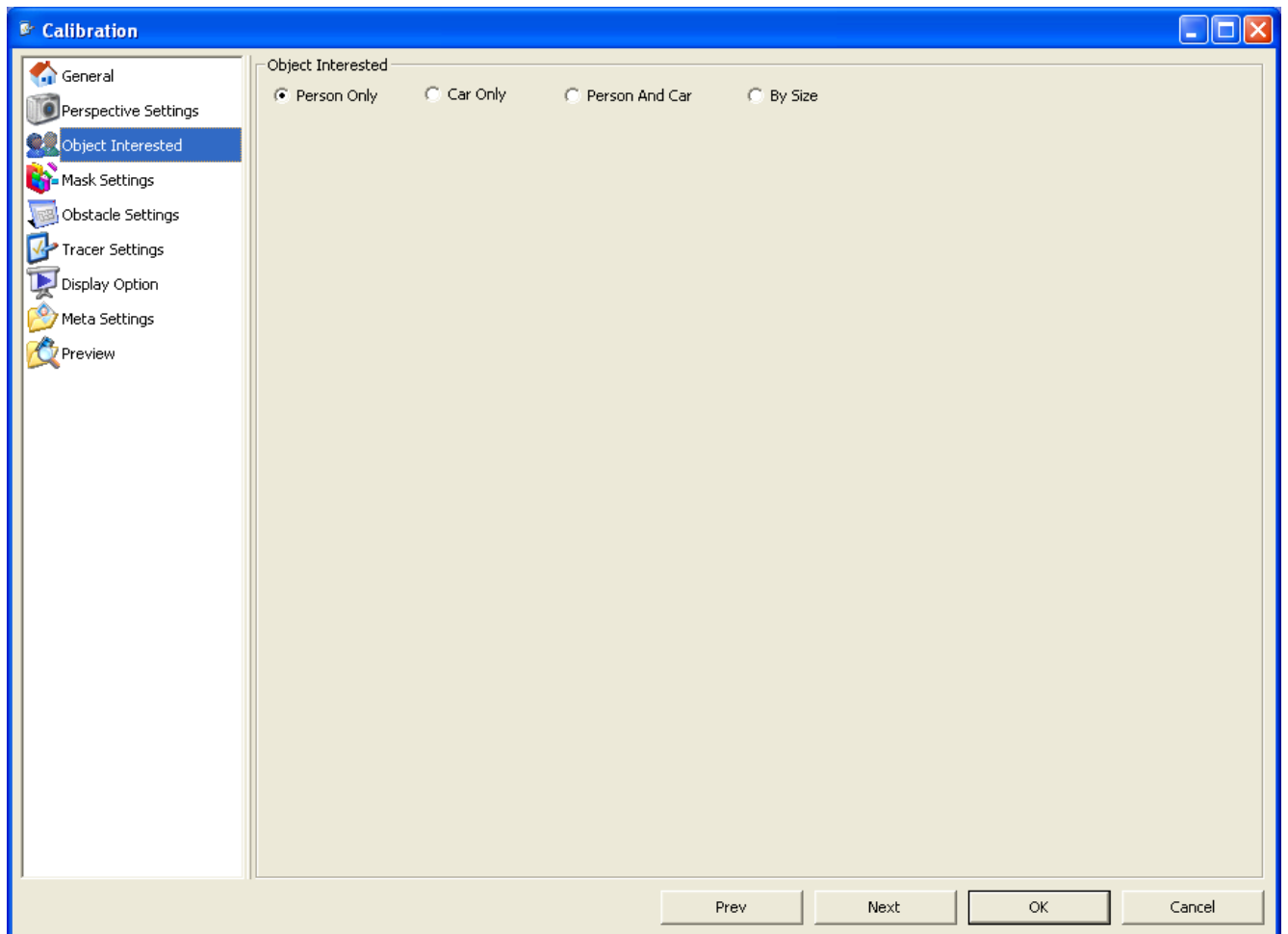
Overhead camera angle:



farthest from the camera. Move and adjust the second person size box to show the size and location of a person closest to the camera. The analytics engine uses the relative person size boxes when it is deciding if an object is a person or a vehicle. Car size is automatically determined relative to the person size.

### 1.1.1.1.3 Object Type

Select the type of objects that will be moving through the image. The analytics engine will monitor the video for the selected object types.



#### Object by Size:

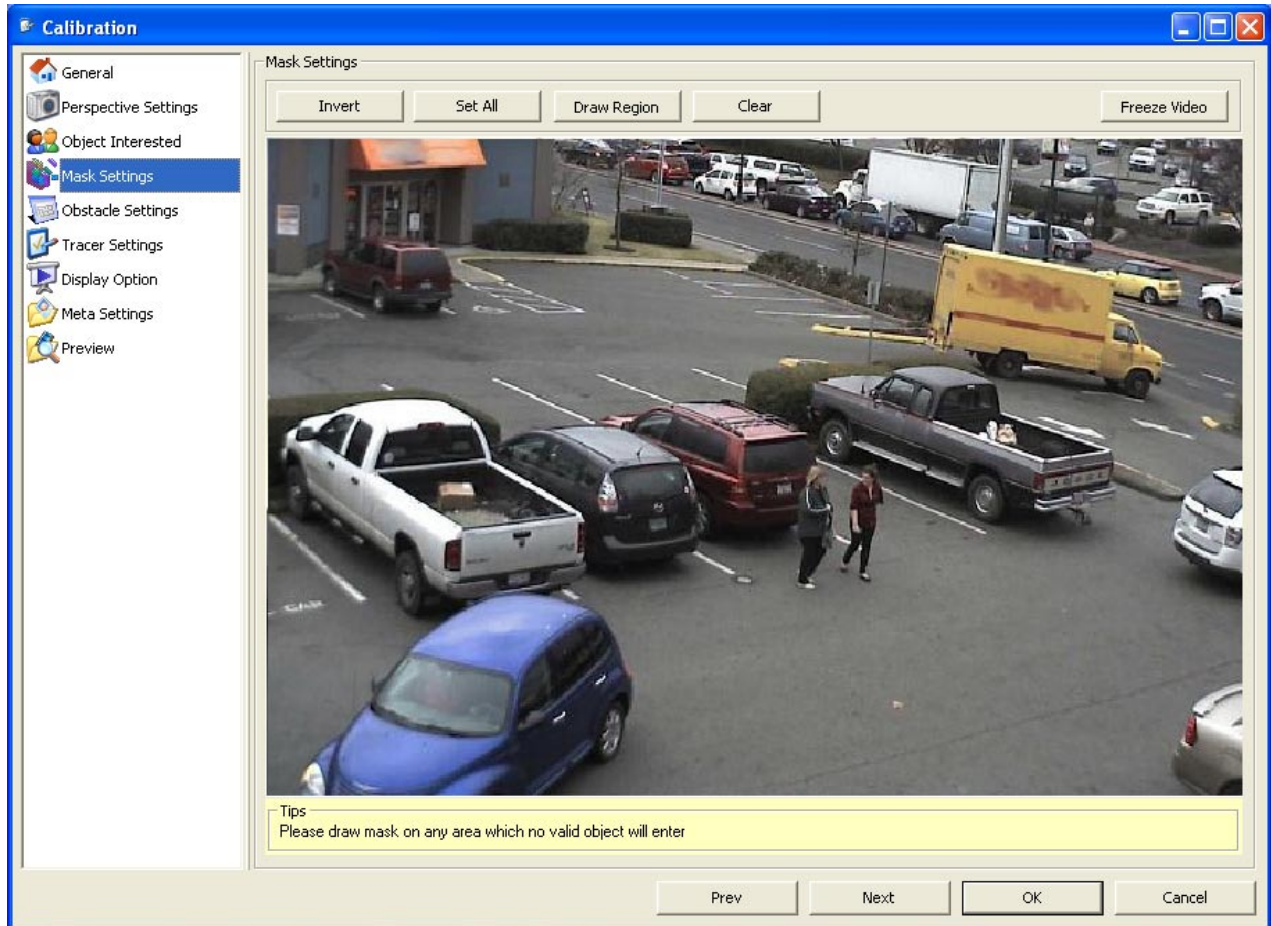
Object By Size tracks only objects strictly within the configured object size. Set the minimum and maximum object size by adjusting the size of the two boxes. For perspective cameras, the minimum and maximum Object By Size settings will be automatically adjusted according to the perspective settings.



### 1.1.1.1.4 Mask Settings

Click to mask areas of the image. The analytics engine will ignore the masked sections.

Mask Settings are used to show sections of the image where objects create motion in areas that we are not interested in analyzing. Typically, masked areas are near the edges of the image, for example trees or traffic.



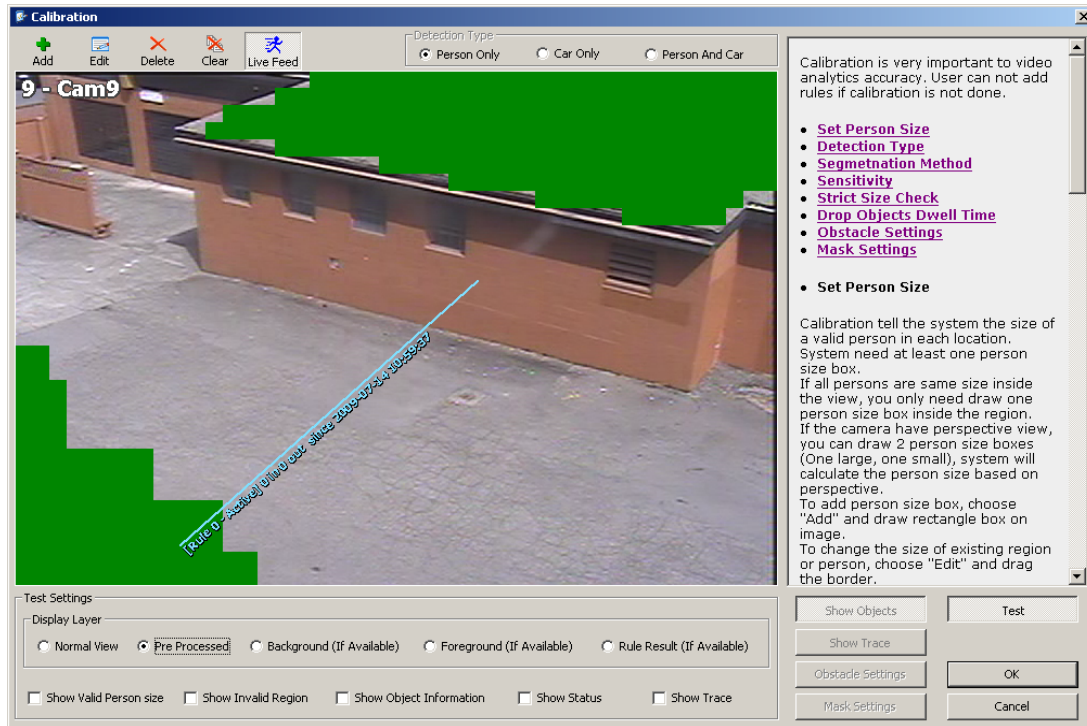
Sample image which could be optimized by the use of masks:



In this image, the tree in the bottom left blows around in the wind and there are flocks of birds that walk around on the roof of the building. Movement detection in the tree and roof area can be a distraction when watching the video footage, so we will mask out the roof and tree areas in this case:



Once a rule is configured, click the *Test* button in the Calibration window to view the masked areas. Only the unmasked sections are used for analytics, select the *Pre Processed Display Layer* to see the green masked sections which are not used for analytics calculations:

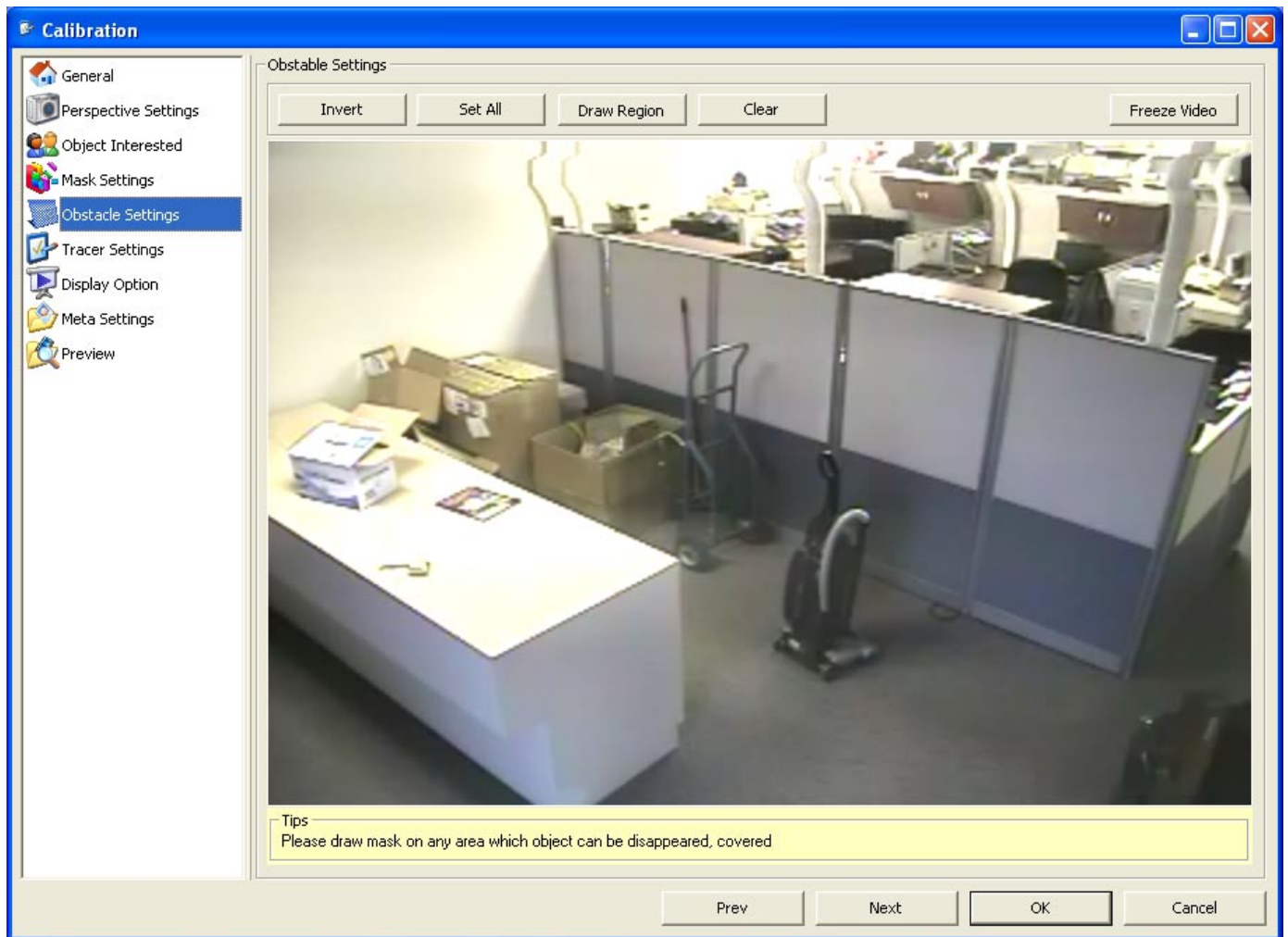


### 1.1.1.1.5 Obsacle Settings

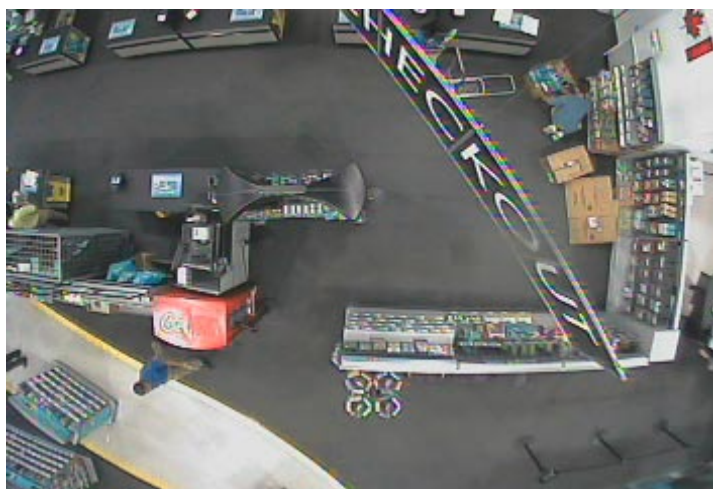
Click to highlight permanent obstacles. The analytics engine will track objects that disappear on one side of the obstacle and then appear on the other side.

Obstacle Settings are used to show sections of the image that are blocked by permanent, narrow objects between the area monitored and the camera. When obstacle masks are configured, the analytics engine understands that an object will disappear behind this area and then reappear on the other side. In some situations, light fixtures, poles, or signs could be obstacles in an image.





Sample image with obstacle:



In this image, once the checkout sign is masked out, analytics knows to that obstacles can move under the checkout sign to the other side:



Red area shows where an obstacle mask is required.

Black arrows show the potential movement of objects through the image once the obstacle mask is configured.

#### **1.1.1.1.6 Tracer Settings**

Select a Predefine Mode based on the Analytics rules that will be used for this camera view.

If you are unsure of which Predefine Mode to use, please use the following settings:

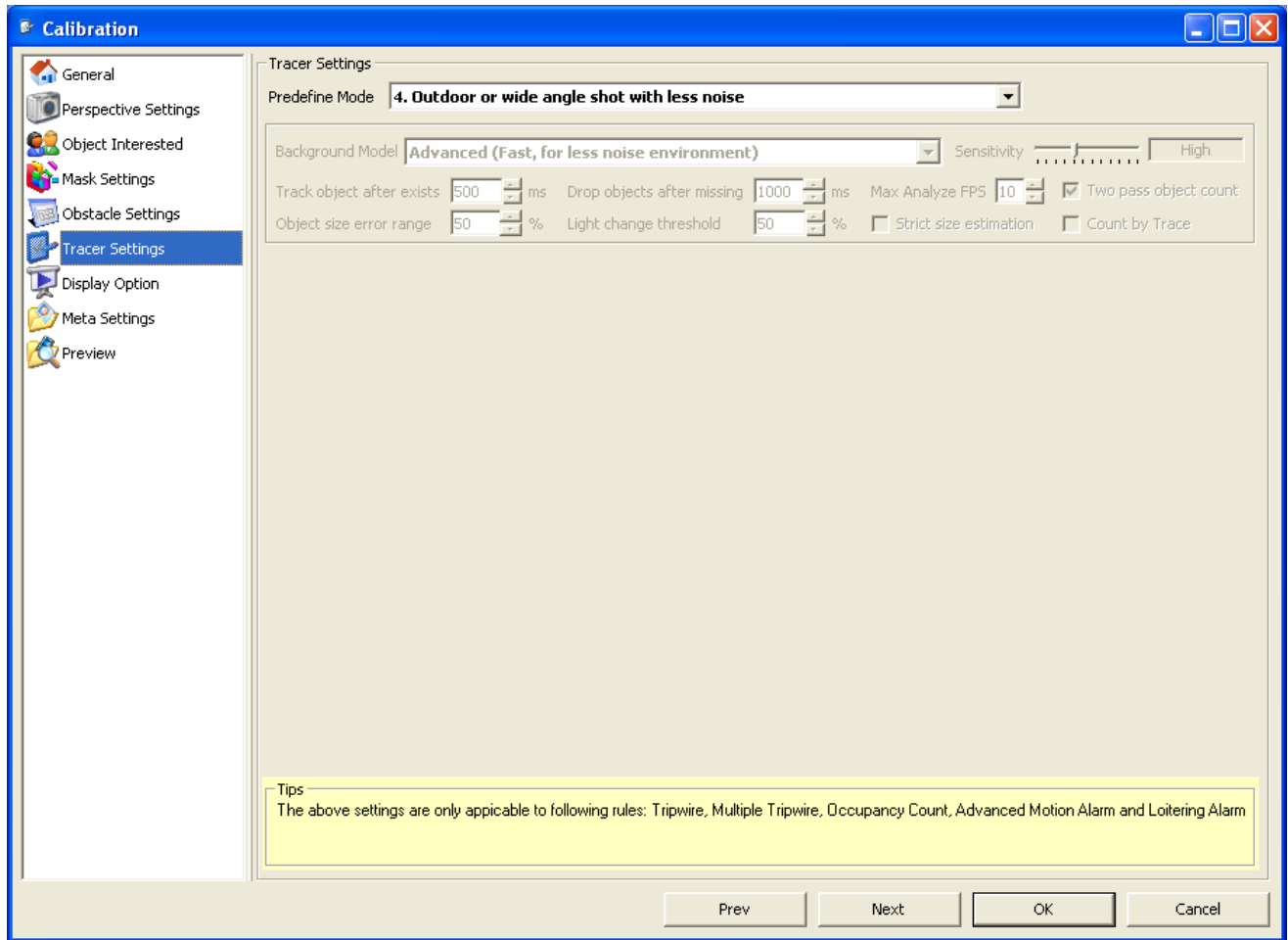
Predefine 1 for Tripwire or Multiple Tripwire rules

Predefine 3 for Occupancy Count rule

Predefine 4 for Loitering Alarm or Advanced Motion Alarm

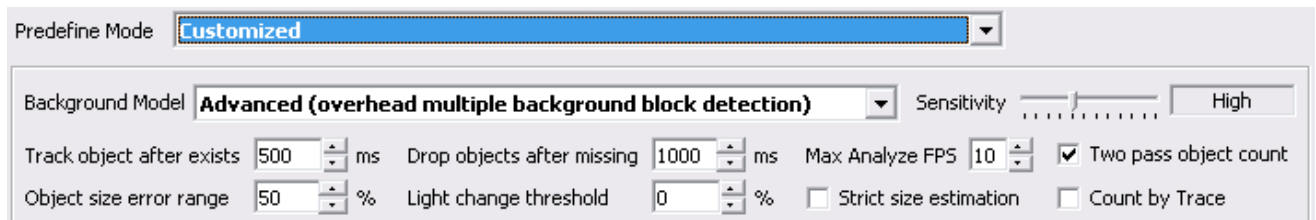
Predefine 8 for Overhead Person Counting rule

Leave as default for Predefine Mode, Density Alarm, Appearing Object, Disappearing Object or Scene Change.



### 1.1.1.1.6.1 Advanced Calibration Settings

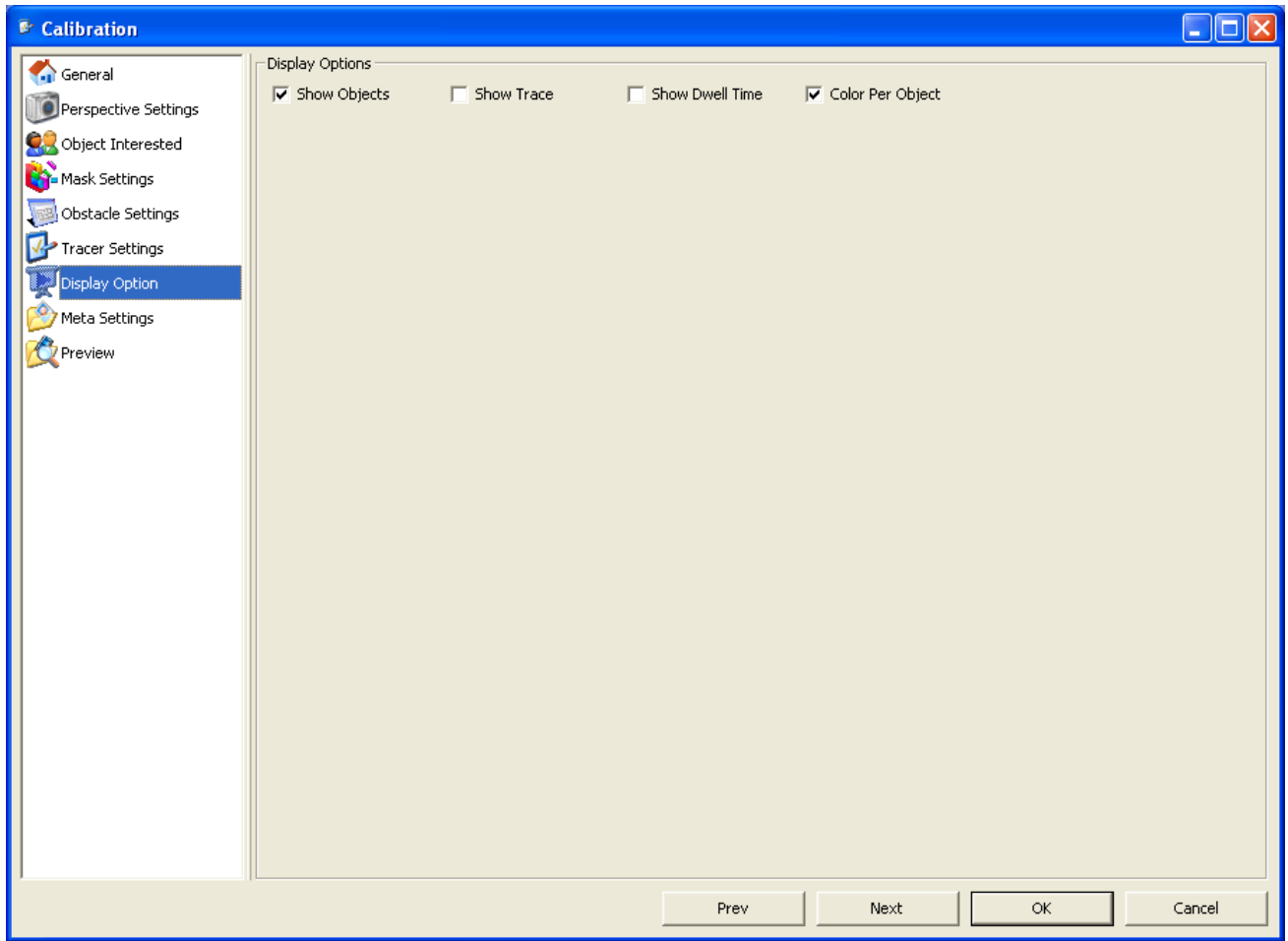
When the *Predefine Mode* is set to *Customized*, the settings can be adjusted manually. It is highly recommended to use one of the predefined modes 1 - 7.



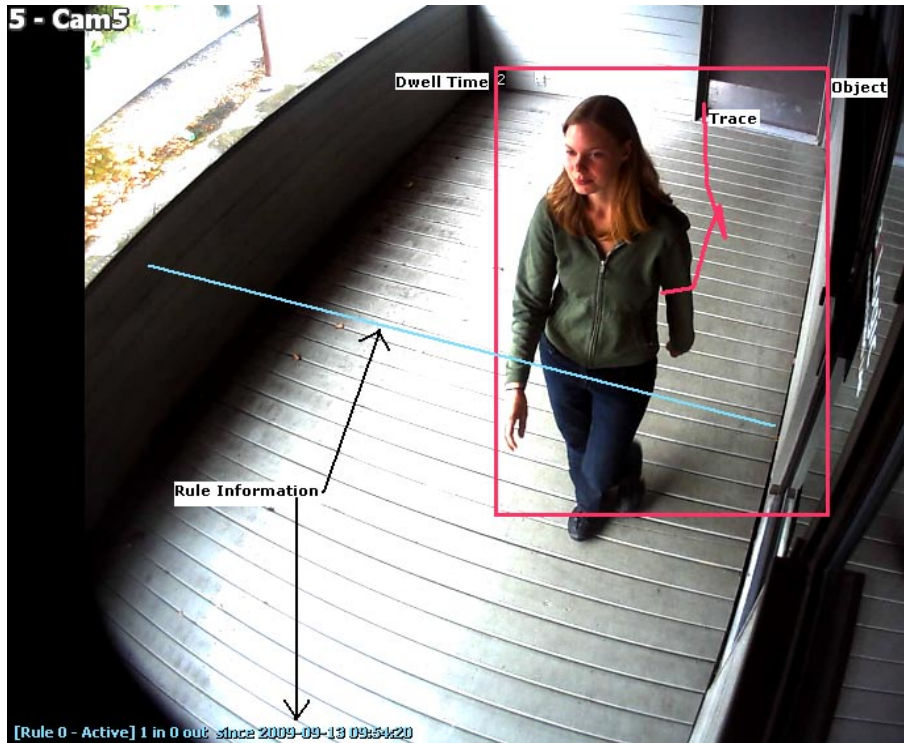
<b>Customized Predefine Mode</b>	When the <i>Predefine Mode</i> is set to <i>Customized</i> , the following settings can be adjusted. Select the most applicable <i>Predefine Mode</i> from the dropdown list first and then select <i>Customized</i> to adjust the calibration settings manually.
<b>Background Model</b>	The method used for object detection. Types include: <ul style="list-style-type: none"> <li>• Simple</li> <li>• Simple with noise removal</li> <li>• Advanced (Fast, for less noise environment)</li> <li>• Advanced (Slow, for noisy environment with trees, grass)</li> </ul>

	etc)
<b>Sensitivity</b>	Adjusts the sensitivity used for analytics object detection. Higher sensitivity will detect more subtle image changes.
<b>Track object after exists ____ ms</b>	<p>The number of milliseconds for which the object must be detected before it is tracked as an object.</p> <p>Increase this value to reduce false alarms. In a very wide field of view, this value can be safely increased. In a narrower field of view, this value must be adjusted with caution and could possibly result in valid persons not being detected if the value is set too high for the conditions.</p>
<b>Drop objects after missing ____ ms</b>	The number of milliseconds for which a tracked object must be missing before it is no longer tracked.
<b>Light change threshold ____ %</b>	<p>0% = disabled (this option is under construction, please do not use until a future version with this option available)</p> <p>Once available, this option will allow light changes to occur within the image without triggering any false objects to appear within the image. For example lights turning on or off.</p>
<b>Max Analyze FPS _____</b>	<p>Adjusts the maximum number of frames per second that will be used for analysis. If this value is increased, more CPU load will be required for the analytics engine.</p> <p>If objects are moving very quickly through the image in a narrow field of view then this value can be increased to detect objects more accurately. If objects are moving very slowly through the image in a wide angle view then this value can be decreased to reduce CPU load.</p>
<b>Two pass object count</b>	Allows more comparison with past frames to provide a more in-depth analysis using logical deductions in views with perspective.
<b>Strict size estimation</b>	More restriction to the person size check is performed to determine valid persons; size check is strictly used.
<b>Count by Trace</b>	<p>Is used to remove false positives. When strict trace check is enabled, objects must meet this criteria in order to be considered valid:</p> <ul style="list-style-type: none"> <li>- Objects must be travelling through the image and move valid distance</li> <li>- Objects must be travelling through the image at a valid speed</li> <li>- Average size of the object must be consistent as it moves through the image</li> </ul>

### 1.1.1.1.7 Display Options



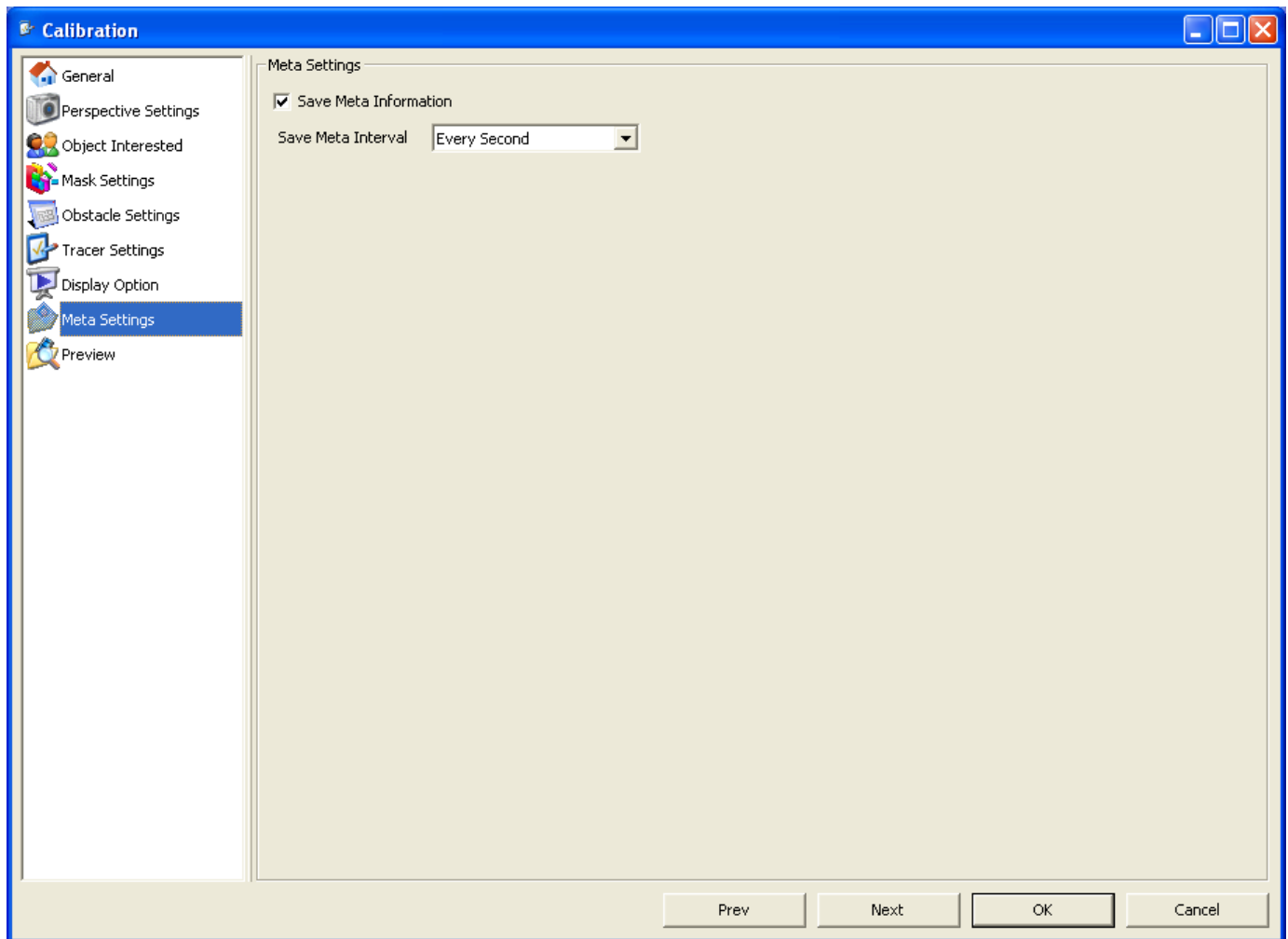




<b>Show Objects</b>	Display a coloured rectangle around valid objects as they enter the rule area.
<b>Show Dwell Time</b>	The number of seconds that the object has been tracked.
<b>Show Trace</b>	Display the number of seconds the object has been tracked.
<b>Coloring Objects</b>	Enabled: Each new object is outlined using a different colour. Disabled: Person sized objects are outlined in green and vehicle-sized objects are outlined in blue. This setting is always used when the <i>Object Interested</i> setting is set to <i>Person and Car</i> .

### 1.1.1.1.8 Meta Information

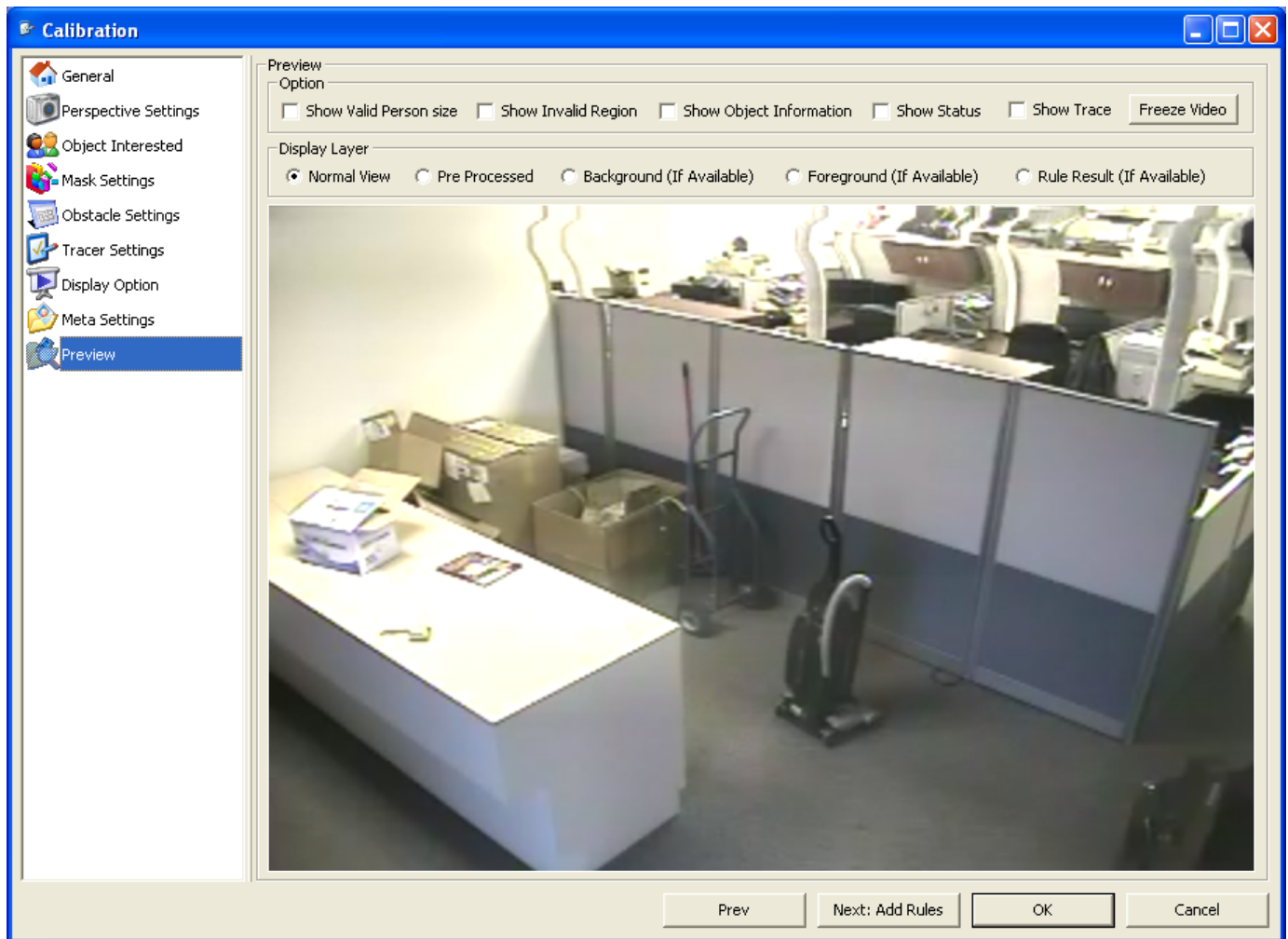
Meta Information is analytics data that is displayed on the image. Enable Save Meta Information to view this data in other windows such as the playback window, in exported video and in Vigil Client.



**Save Meta Interval** - Select the frequency the Meta information is saved.

### 1.1.1.1.9 Preview

Once a rule is configured, return to the calibration window to test the configured settings. Click the Test button to access the testing mode.



### Options:

**Show Valid Person Size** – When a person is in the image, shows the valid person size

**Show Invalid Region** – When an object that does not meet person size criteria is moving through the image, this option displays the analyzed size of the object

**Show Object Information** – Displays information about the object when it appears in the image

**Show Status** – Show information about the current settings in the bottom left corner of the image

**Show Trace** – Shows the “Trace” of a moving object through the image

### Display Layer:

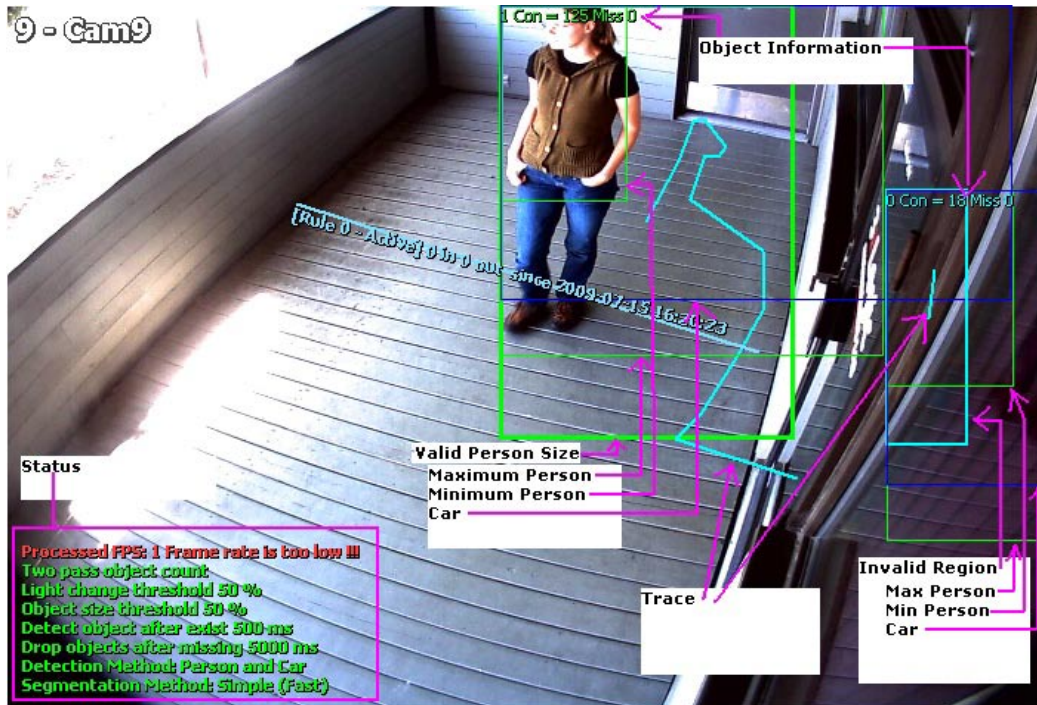
Normal View: The view normally used in the Vigil Server live window

Pre Processed: The view used by the analytics engine

Background (If Available): The calculated background image

Foreground (If Available): Objects moving over the background image

Rule Result (If Available): The analytics rule result used within the analytics engine



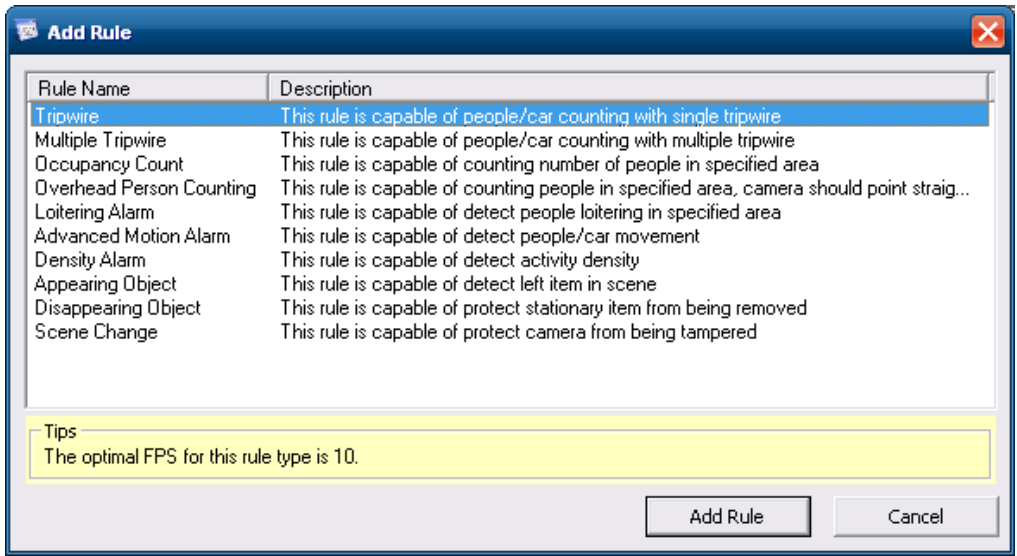
### 1.1.1.2 Video Analytics Rules

Each kind of rule is a type of monitor for movement or change within the video. Several rules can be added for each camera, each with their own region and settings.



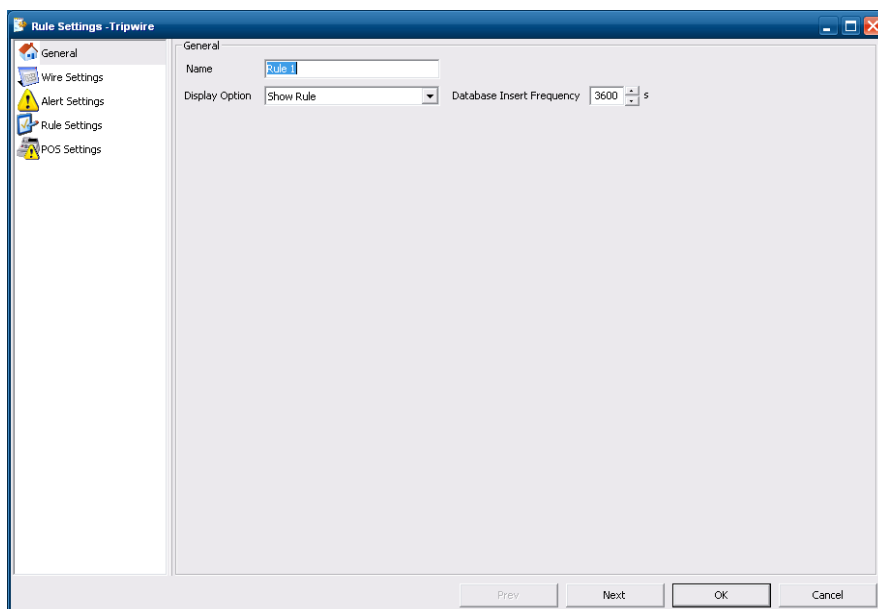
**Note:** Before rules can be added, the camera must be calibrated. See the previous section for details.

<p>Add Rule</p>	<p>Opens the <i>New Rule</i> window where you can choose a rule type to add. Choose from <i>Tripwire</i>, <i>Occupancy Count</i>, <i>Loitering Alarm</i>, <i>Motion Alarm</i>, <i>Density Alarm</i>, <i>Appearing Alarm</i>, <i>Disappearing Alarm</i>, or <i>Scene Change</i>.</p>
<p>Edit Rule</p>	<p>Opens the <i>Rule Settings</i> window for the selected rule.</p>
<p>Delete Rule</p>	<p>Deletes the selected rule.</p>



When adding a video analytics rule, the *General*, *Alert Settings* and *POS Settings* are the same for each rule type. See below for settings specific to each rule.

### 1.1.1.2.1 General



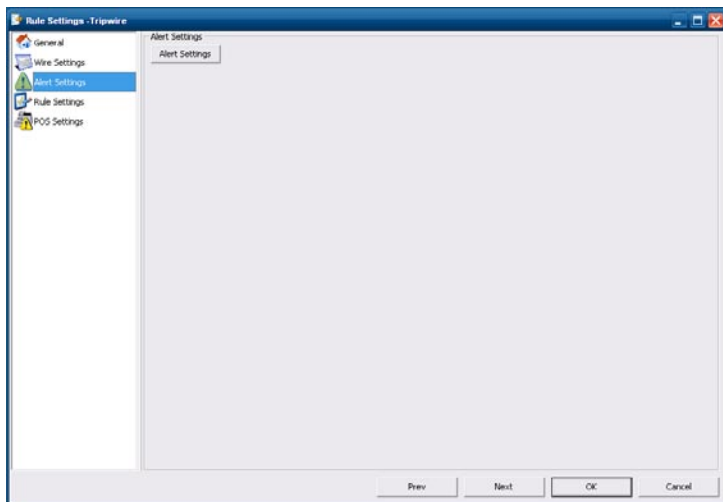


**Name** – The rule name is used to easily identify the alarm in the settings, live and alarms windows.

**Display Option** – Select when the rule should be displayed in the live viewer. *Show Rule* will always display the rule, *Not Show Rule* will never display the rule, *Show Rule When Alarmed* will only show the rule while the alarm is triggered.

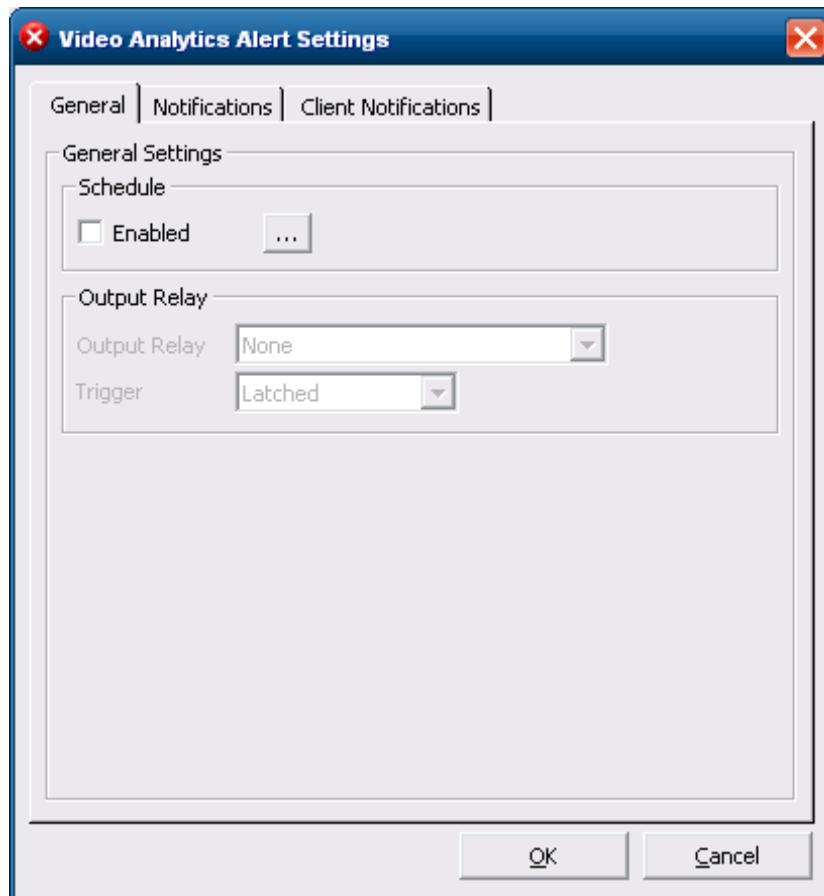
**Database Insert Frequency** – The number of seconds between database entries. When a database insert is performed the on-screen count restarts. This setting is available for applicable analytics rules.

### 1.1.1.2.2 Alert Settings



Alert Settings

Opens the *Video Analytics Alert Settings* window that allows you to schedule the alarm recording period and configure alerts.



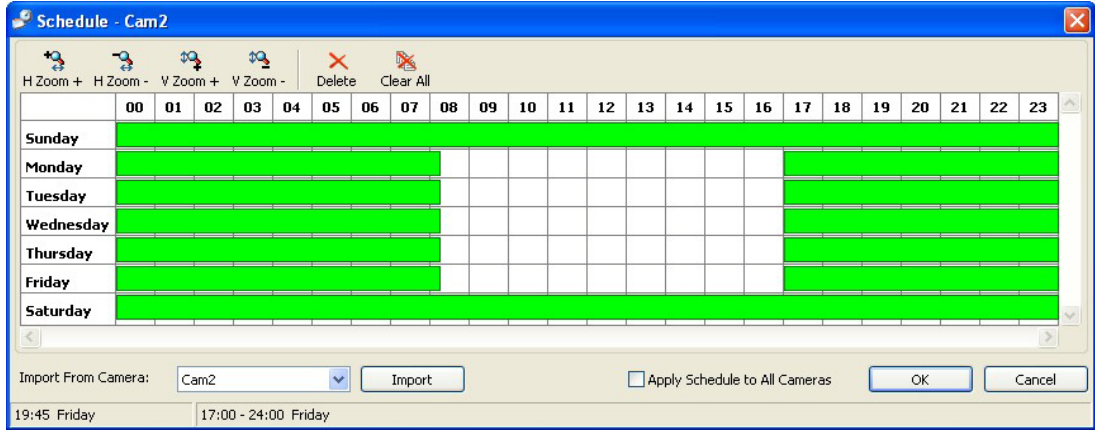
#### 6.1.5.2.2.1 General Tab


##### Schedule


##### Enabled


When a schedule is enabled, the analytics rule will only be active during the scheduled times. Click the ... button to open the *Schedule* window or edit an existing video analytics rule schedule.

To add a time period where the video analytics rule is enabled, click-and-drag across the desired time slot. Areas that are blank (no color) will disable the alert for those time periods.



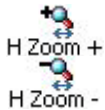
 **Note:** Creating or modifying a video analytics rule schedule will not affect camera recording.

 **Note:** During blank areas, the video analytics rule is inactive.

 **Note:** The smallest time interval that can be used is a 15 minute period.

**Analytics Enabled**

Sections that have analytics enabled are colored **green**.



Expands and contracts the time graph horizontally. This allows for better precision in setting the time period.



Expands and contracts the time graph date graph vertically.

**Moving a time period**

Click and hold the *Shift* key and click-and-drag the section.

**Copying a time period**


Click and hold the *Ctrl* key and click-and-drag the section.

**Changing the start or end time of a period**

Select the section by clicking on it and then click-and-drag the right or left edge of the section.

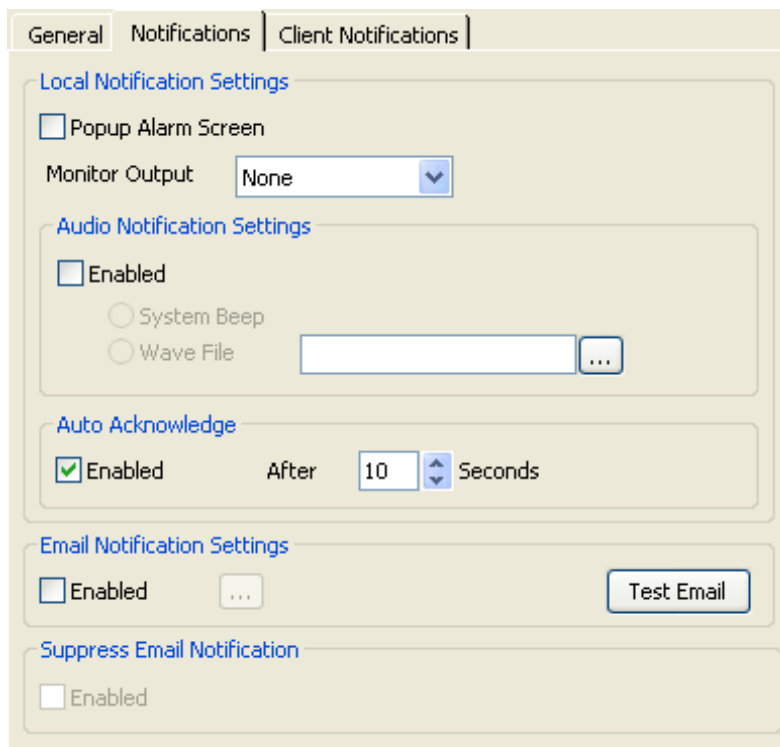
**Importing a schedule**

Select the camera from the *Import From Camera* drop-down menu and then click *Import*.

<p><b>from another camera</b></p>	<p> <b>Note:</b> Importing the analytics rule schedule of another camera will overwrite the schedule of the current camera.</p>
<p><b>Viewing the start and end times of a section</b></p>	<p>Select the section by clicking on it. The start and end time of the selected section are displayed near the bottom left corner of the <i>Schedule</i> window.</p> <p>You can also move the mouse cursor over the any part of the section and the time will be displayed near the bottom as well.</p>
<p><b>Deleting a time period</b></p>	<p>Select the section by clicking on it and then click <i>Delete</i>.</p>
<p><b>Deleting a schedule</b></p>	<p>Click the <i>Clear All</i> Button to delete the entire schedule.</p>
<p><b>Apply Schedule To All Cameras</b></p>	<p>When marked, this checkbox will apply the created schedule to all cameras that have schedule motion alarm recording enabled. This will not affect other cameras that have disabled the schedule for <i>Motion Alarm</i>.</p>

### 1.1.1.2.2.2 Notifications Tab

The *Notifications* tab allows you to configure various notifications, locally or via email, when an analytics alarm is triggered.



General | **Notifications** | Client Notifications

**Local Notification Settings**

Popup Alarm Screen

Monitor Output: None

**Audio Notification Settings**

Enabled

System Beep

Wave File ...

**Auto Acknowledge**

Enabled    After 10 Seconds

**Email Notification Settings**

Enabled ... Test Email

**Suppress Email Notification**

Enabled

### Local Notification Settings

A local notification is popup alarm window that is displayed locally on the DVR.

#### Popup Alarm Window

Select this option to have the *Alarm* window automatically displayed when an analytics alarm is triggered.

#### Monitor Output

Select an analog output monitor to display the triggered camera at the time of the analytics alarm.

### Audio Notification Settings

#### Enable

Enables audio notification when an analytics alarm is triggered. Two audio notification types are available:

- **System Beep** - Sounds a system beep.
- **Wave File** – Plays a WAV audio file.

### Auto Acknowledge

#### Enable

Enables the automatic acknowledge for analytics alarm notifications after the specified number of seconds.

### Email Notification Settings

When enabled, an email is sent to all recipients informing them that an analytics alarm has been triggered.

#### Enabled

Enables *Email Notification* and opens the *Email Settings* window where you can configure the email settings and email notification recipients.




### Email Header Options

<b>From (Name)</b>	The name of the entity that will be sending the emails.
<b>From (Address)</b>	The email address of the entity that will be sending the emails.
<b>Subject</b>	The text that will be the subject line of the emails.
<b>Email Body</b>	The text that will be included in the body of the emails.
<b>Attach Still Shot</b>	Allows a still image from that camera to be attached to the outgoing email. The image is always from the beginning of the analytics alarm event.

### Recipients

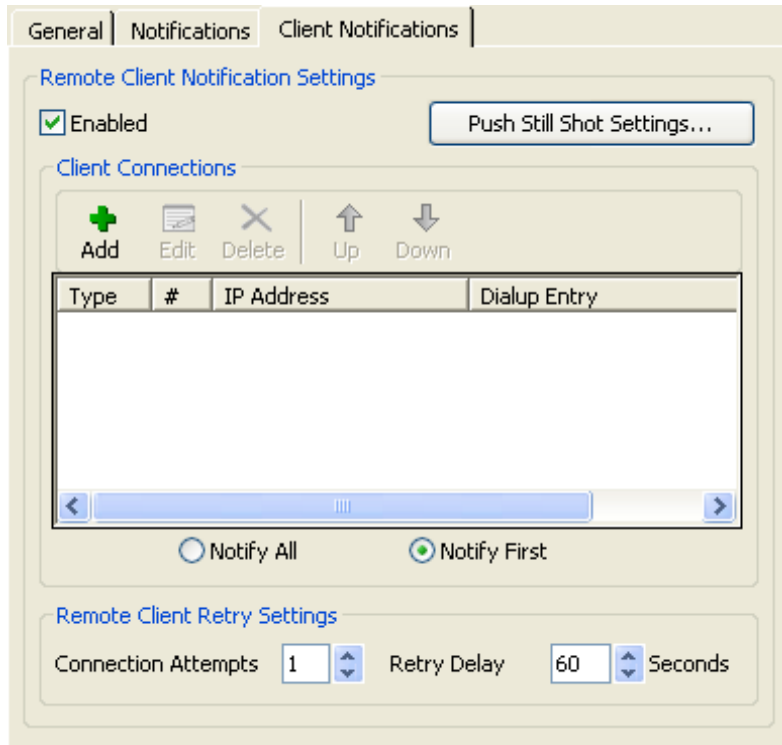
These are the lists of recipients who will receive analytics alarm notifications. There are three lists of recipients, direct recipients, carbon copied recipients and blind carbon copied recipients.

<b>Add</b>	Allows you to add an email address to the recipient list.
------------	---

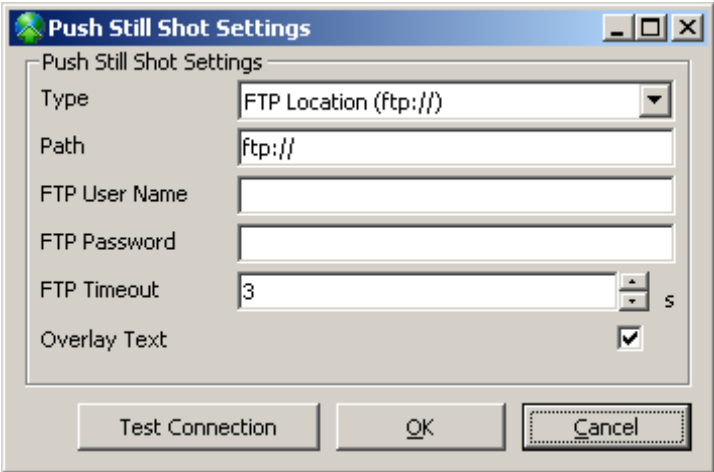
	<div data-bbox="802 254 1263 470" data-label="Image"> </div>
	<p><b>Edit</b> Edits the selected email address.</p>
	<p><b>Delete</b> Prompts to remove the selected email address from the recipients list.</p>
<div data-bbox="204 684 354 737" data-label="Image"> </div>	<p>Sends a test email based on your notification settings and email configuration.</p>
	<p> <b>Note:</b> For email to function properly, a valid SMTP Server must be configured in the <i>DVR Settings</i> tab.</p>
<p><b>Suppress Email Notification</b></p>	
<p><b>Enabled</b></p>	<p>This option, which will only work in conjunction with enabling <i>Popup Alarm Screen</i>, will prevent a flood of email alerts being sent out. It will only send out one email alert until the alerts have been acknowledged in the popup <i>Alarm</i> window in <i>Vigil Server</i>. If alerts have been set to <i>Auto Acknowledge</i>, it will send out an email after each period of auto acknowledgement has passed.</p>


### 6.1.5.2.2.3 Client Notifications Tab

The *Client Notifications* tab allows you to configure the settings to send analytics alarm notifications to Vigil Client(s).




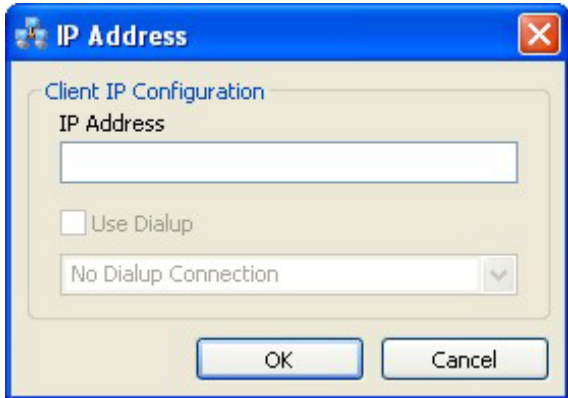


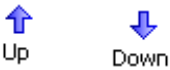
### Remote Client Notification Settings

<p><b>Enabled</b></p>	<p>When enabled, allows you to add clients that will receive alarm notifications from the DVR.</p>
<p>Push Still Shot Settings...</p>	<p>Opens the <i>Push Still Shot Settings</i> window, where a location and log-in settings are configured for access to the still shot image.</p> 
<p><b>Type</b></p>	<p>Select the location type: an <i>FTP Location</i>, <i>Windows Network Share</i>, or the <i>Local Drive</i>.</p>
<p><b>Path</b></p>	<p>Enter the location path.</p>

<b>FTP User Name</b>	Enter the user name to use for the FTP location type.
<b>FTP Password</b>	Enter the password to use for the FTP location type.
<b>FTP Timeout</b>	Enter the amount of seconds to attempt a connection to an FTP location before the attempt is stopped.
<b>Overlay Text</b>	When enabled, the date and time of the still shot are displayed on the pushed image.
	Tests the connection to the location path.

### Client Connections

A list of remote computers running Vigil Client

	Allows you to add a remote client to the notification list. To use the dialup feature, a dialup connection must be created in Windows.
	
	Edits the selected client connection allowing you to change the IP address or dialup connection.
	Prompts you if you want to delete the selected client connection.
	Moves the selected client connection up or down. This is useful to set which client receives the motion alarm notifications when <i>Notify First</i> is selected.
<b>Notify All/First</b>	Allows you to choose whether alarm notifications are received by all client connections, or only the first client connection to which it is able to successfully connect.

### Remote Client Retry Settings

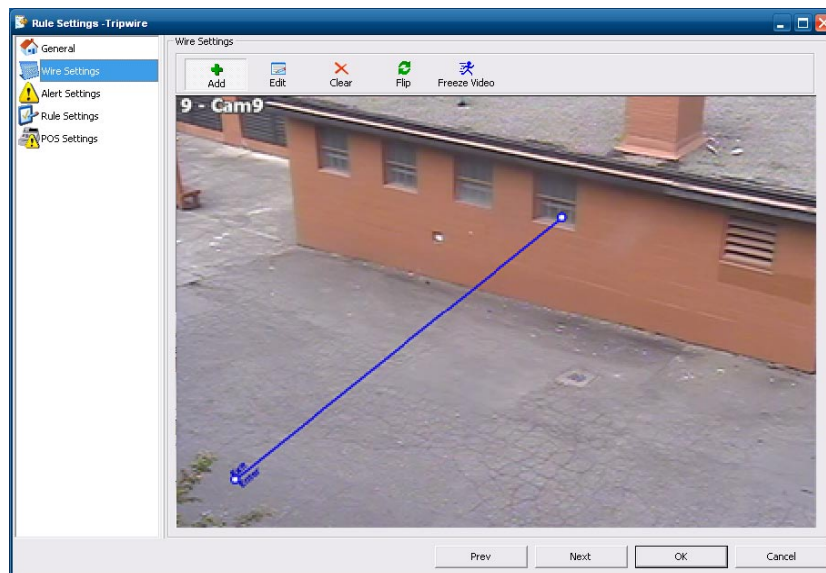
<b>Connection Attempts</b>	The number of attempts to retry sending an alarm to a client connection.
<b>Retry Delay</b>	The interval, in seconds, to wait between retries.



### 6.1.8.2.1 Tripwire

The tripwire rule counts the number of people entering and exiting an area based on a tripwire line drawn on the threshold between the two areas. Alarms can be generated when a given number of people have entered or exited the area within a set period of time.

#### 1.1.1.2.2.3 Wire Settings

Click on the image to draw the tripwire threshold where objects will be counted. There must be enough space on either side of the tripwire to detect object movement and identify the object type.



<b>Add</b>	Click the <i>Add</i> button and then click to draw the tripwire.
<b>Edit</b>	Click the <i>Edit</i> button and then click and drag the points of the tripwire.
<b>Clear</b>	Click <i>Clear</i> to remove all tripwire settings from the image.
 Flip	Flips the direction of the tripwire, so that Enter and Exit are switched. <i>Exit</i> should be displayed on the side of the line where people have exited the area. <i>Enter</i> should be displayed on the side of the line where people have entered the area.
 Freeze Video	Click the <i>Freeze Video</i> button to pause the live video. Click the button again to display live video.



### 1.1.1.2.2.4 Rule Settings

Rule Settings

Tripwire Direction: Enter And Exit

Alarm Settings

Enter Alarm    Trigger alarm if 1 or more objects enter in 60 seconds

Exit Alarm    Trigger alarm if 1 or more objects exit in 60 seconds

Alarm Dwell: 2 s     Reset Statistics When Alarmed

#### Tripwire Direction Enter Alarm

Choose to monitor objects entering only, exiting only, or entering and exiting.

The *Enter Alarm* is triggered based on the number of people entering during a period of time. Check the *Enter Alarm* checkbox to enable the alarm and then select number of people and period of time in seconds using the arrow select tools.

#### Exit Alarm

The *Exit Alarm* is triggered based on the number of people exiting during a period of time. Check the *Exit Alarm* checkbox to enable the alarm and then select number of people and period of time in seconds using the arrow select tools.

#### Alarm Dwell

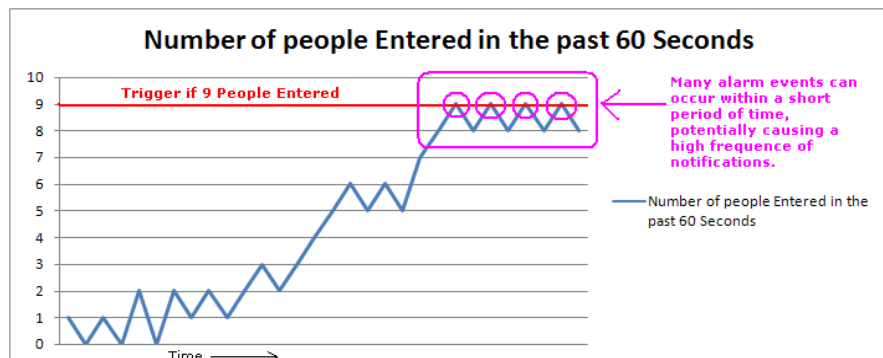
The number of seconds of video recorded in alarm mode once the alarm is triggered.

#### Reset Statistics when Alarmed

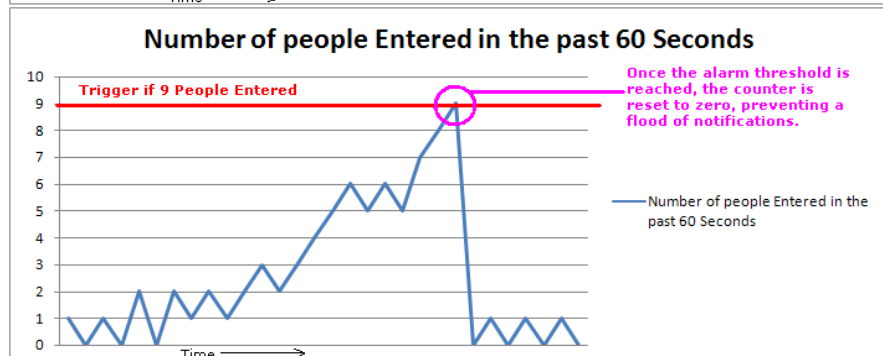
Enable this option to reset the statistics to zero once the alarm is triggered.

Due to the nature of the data gathered, disabling the Reset Statistics When Alarmed feature can cause a flood of notifications when the threshold is reached.

#### Reset Statistics When Alarmed Disabled



#### Reset Statistics When Alarmed Enabled

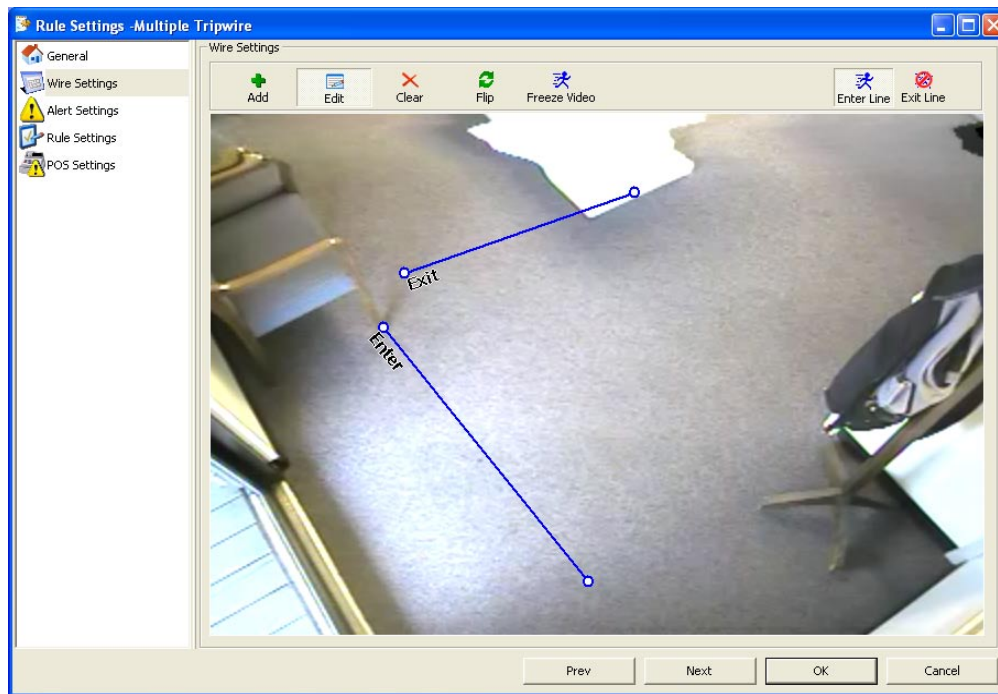


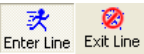
### 1.1.1.2.3 Multiple Tripwire



The multiple tripwire rule counts the number of people entering and exiting an area based on two tripwire lines drawn between the two areas. The person must cross both tripwires to be counted. Alarms can be generated when a given number of people have entered or exited the area within a set period of time.

#### 1.1.1.2.3.1 Wire Settings

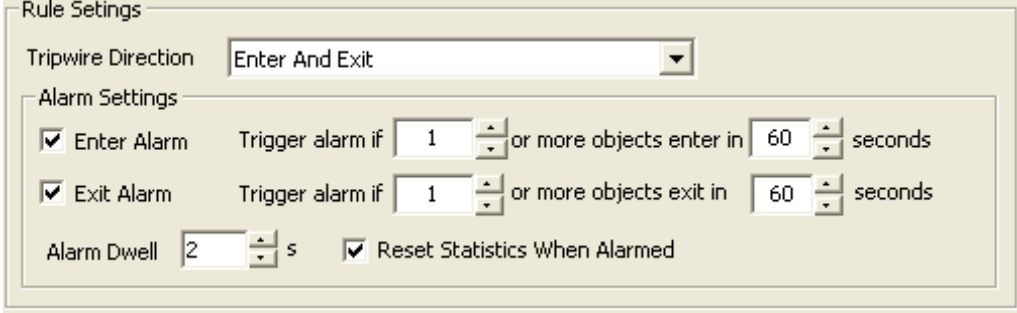
Click on the image to draw the first tripwire threshold where objects will be counted. Select *Exit Line* and then click on the image to draw the second tripwire threshold where objects will be counted. There must be enough space on either side of the tripwire to detect object movement and identify the object type. The tripwire labelled *Enter* is the first line crossed by a person entering the area. The tripwire labelled *Exit* is the first line crossed by a person exiting the area.



<b>Add</b>	 Click the <i>Add</i> button and then click to draw the tripwire. Select <i>Enter Line</i> and click on the image to draw the first tripwire then select <i>Exit Line</i> and click on the image to draw the second tripwire. The two tripwires represent the threshold where objects will be counted.
<b>Edit</b>	Click the <i>Edit</i> button and then click and drag the points of the tripwire.
<b>Clear</b>	Click <i>Clear</i> to remove all tripwire settings from the image.

	Flips the direction of the tripwires, so that Enter and Exit are switched.
	Click the <i>Freeze Video</i> button to pause the live video. Click the button again to display live video.

### 1.1.1.2.3.2 Rule Settings



#### Tripwire Direction

Choose to monitor objects entering only, exiting only, or entering and exiting. For an object to be counted entering or exiting, it must cross both tripwire lines.

#### Enter Alarm

The *Enter Alarm* is triggered based on the number of people entering during a period of time. Check the *Enter Alarm* checkbox to enable the alarm and then select number of people and period of time in seconds using the arrow select tools.

#### Exit Alarm

The *Exit Alarm* is triggered based on the number of people exiting during a period of time. Check the *Exit Alarm* checkbox to enable the alarm and then select number of people and period of time in seconds using the arrow select tools.

#### Alarm Dwell

The number of seconds of video recorded in alarm mode once the alarm is triggered.

#### Reset Statistics when Alarmed

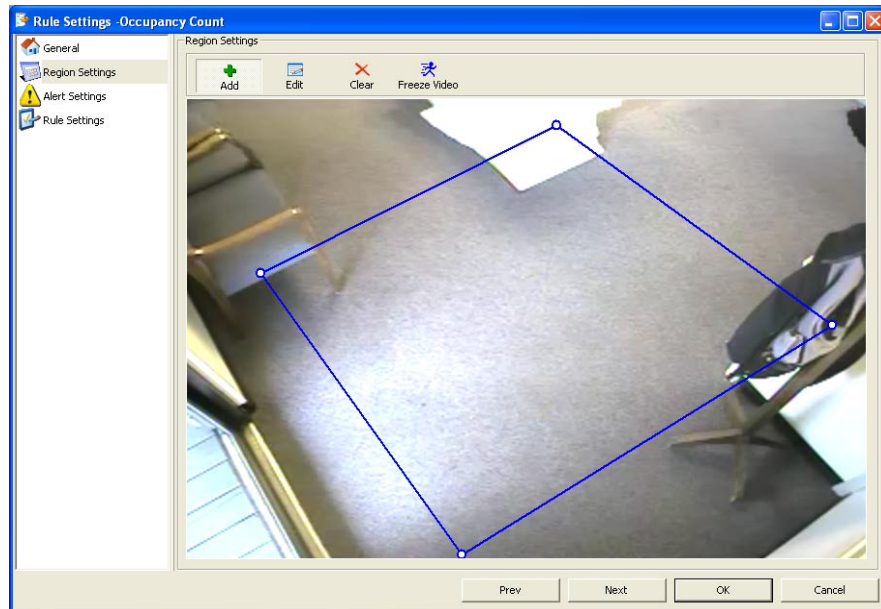
Enable this option to reset the statistics to zero once the alarm is triggered.

Due to the nature of the data gathered, disabling the Reset Statistics When Alarmed feature can cause a flood of notifications when the threshold is reached. Please refer to the Tripwire section for a graph visualising the potential flood of notifications.

### 1.1.1.2.4 Occupancy Count

Counts the number of people within an area based on a region drawn on the image. Alarms can be generated when a specified number of people are within the area.

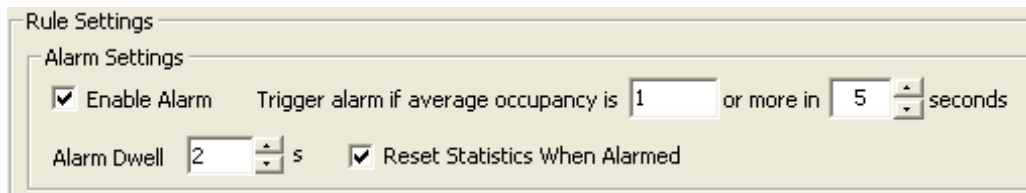
#### 1.1.1.2.4.1 Region Settings



**Add**  
**Edit**  
**Clear**  
  
Freeze Video

Click the *Add* button and then click to draw the corners of the region. Click on the original point to complete the region.  
Click the *Edit* button and then click and drag the corners of the region.  
Click *Clear* to remove all tripwire settings from the image.  
Click the *Freeze Video* button to pause the live video. Click the button again to display live video.

#### 1.1.1.2.4.2 Rule Settings



##### Enable Alarm

The alarm is triggered based on the number of people occupying the selected area during a period of time. Check the *Enable Alarm* checkbox to enable the alarm and then enter number of people and period of time in seconds.

##### Alarm Dwell

The number of seconds of video recorded in alarm mode once the alarm is triggered.

##### Reset Statistics when Alarmed

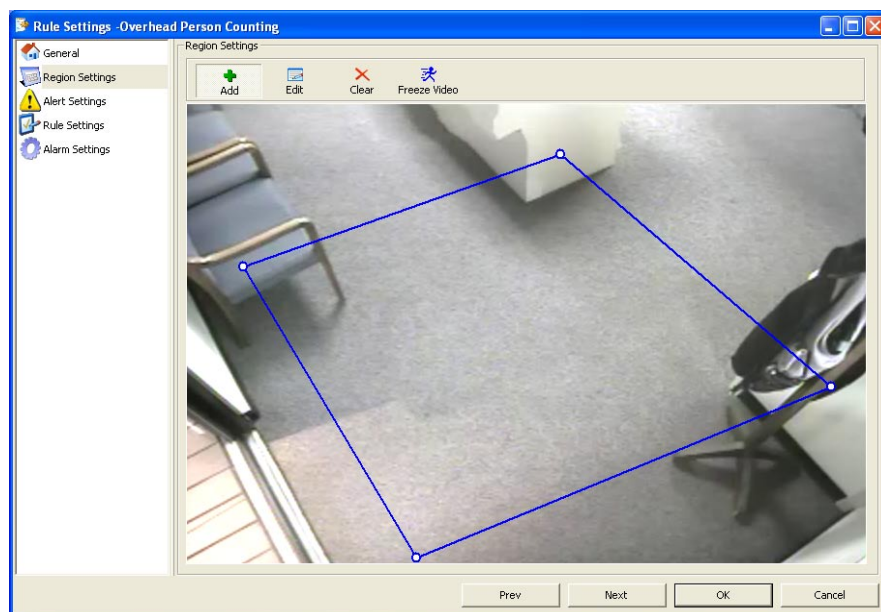
Enable this option to reset the statistics to zero once the alarm is triggered.

Due to the nature of the data gathered, disabling the Reset Statistics When Alarmed feature can cause a flood of notifications when the threshold is reached. Please refer to the Tripwire section for a graph visualising the potential flood of notifications.

#### 1.1.1.2.5 Overhead Person Counting

Similar to *Occupancy Count*, this rule type is designed for increased accuracy on indoor cameras pointed straight down at the ground. If the camera is a perspective camera or has a lot of “noise” in the image for example an outdoor camera, please use the *Occupancy Count* rule. Counts the number of people within an area based on a region drawn on the image. Alarms can be generated when a specified number of people are within the area.

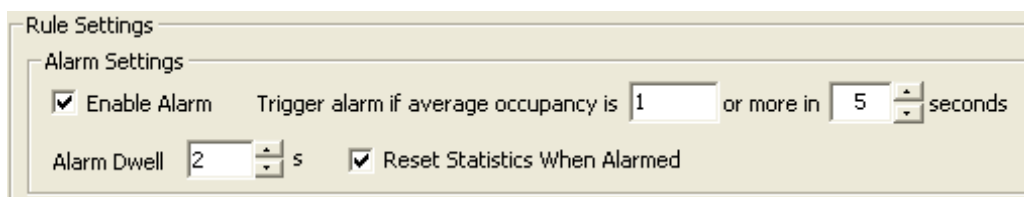
### 1.1.1.2.5.1 Region Settings



**Add**  
**Edit**  
**Clear**  
  
Freeze Video

Click the *Add* button and then click to draw the corners of the region. Click on the original point to complete the region.  
Click the *Edit* button and then click and drag the corners of the region.  
Click *Clear* to remove all tripwire settings from the image.  
Click the *Freeze Video* button to pause the live video. Click the button again to display live video.

### 1.1.1.2.5.2 Rule Settings



**Enable Alarm**

The alarm is triggered based on the number of people occupying the selected area during a period of time. Check the *Enable Alarm* checkbox to enable the alarm and then enter number of people and period of time in seconds.

**Alarm Dwell**

The number of seconds of video recorded in alarm mode once the alarm is triggered.

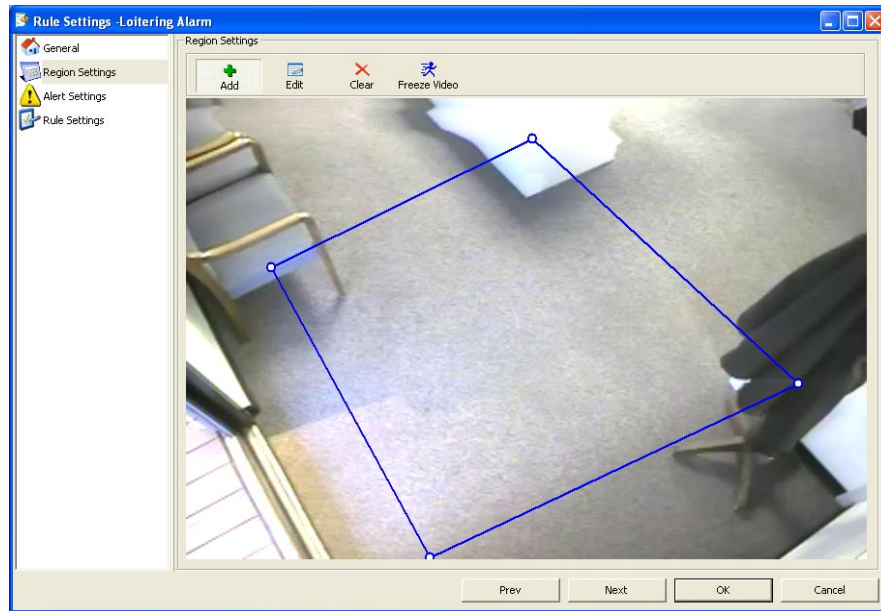
## Reset Statistics when Alarmed

Enable this option to reset the statistics to zero once the alarm is triggered.

Due to the nature of the data gathered, disabling the Reset Statistics When Alarmed feature can cause a flood of notifications when the threshold is reached. Please refer to the Tripwire section for a graph visualising the potential flood of notifications.

### 1.1.1.2.6 Loitering Alarm

Tracks the motion density within the specified area over a period of time. Alarms are generated when the specified motion density is reached for the given time period.



#### Add

#### Edit Clear

  
Freeze Video

Click the *Add* button and then click to draw the corners of the region. Click on the original point to complete the region.

Click the *Edit* button and then click and drag the corners of the region.

Click *Clear* to remove all tripwire settings from the image.

Click the *Freeze Video* button to pause the live video. Click the button again to display live video.

#### 1.1.1.2.6.1 Rule Settings

Motion Density Threshold	50	%	Period	60	seconds
Alarm Dwell	2	s	<input checked="" type="checkbox"/>	Reset Statistics When Alarmed	

#### Motion Density Threshold Period

The percentage of density required for the alarm to be triggered.

The period of time during which the density threshold is measured.



## Alarm Dwell

The number of seconds of video recorded in alarm mode once the alarm is triggered.

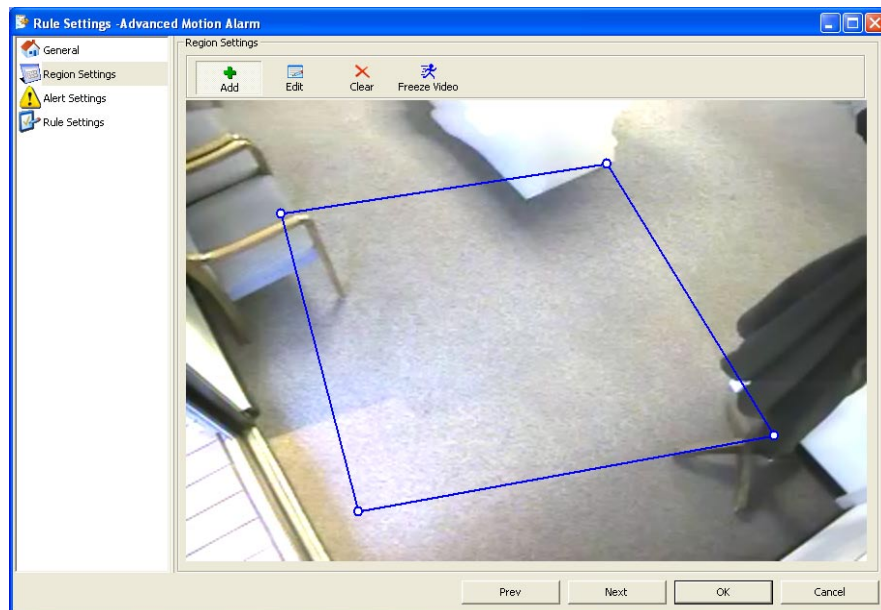
## Reset Statistics when Alarmed

Enable this option to reset the statistics to zero once the alarm is triggered.

Due to the nature of the data gathered, disabling the Reset Statistics When Alarmed feature can cause a flood of notifications when the threshold is reached. Please refer to the Tripwire section for a graph visualising the potential flood of notifications.

### 1.1.1.2.7 Advanced Motion Alarm

Detects people or cars within a specified area. Alarms can be generated when a person or car is detected.



#### Add

Click the *Add* button and then click to draw the corners of the region. Click on the original point to complete the region.

#### Edit

Click the *Edit* button and then click and drag the corners of the region.

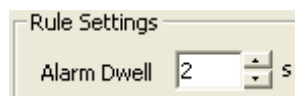
#### Clear

Click *Clear* to remove all tripwire settings from the image.

#### Freeze Video

Click the *Freeze Video* button to pause the live video. Click the button again to display live video.

#### 1.1.1.2.7.1 Rule Settings



#### Alarm Dwell

The number of seconds of video recorded in alarm mode once the alarm

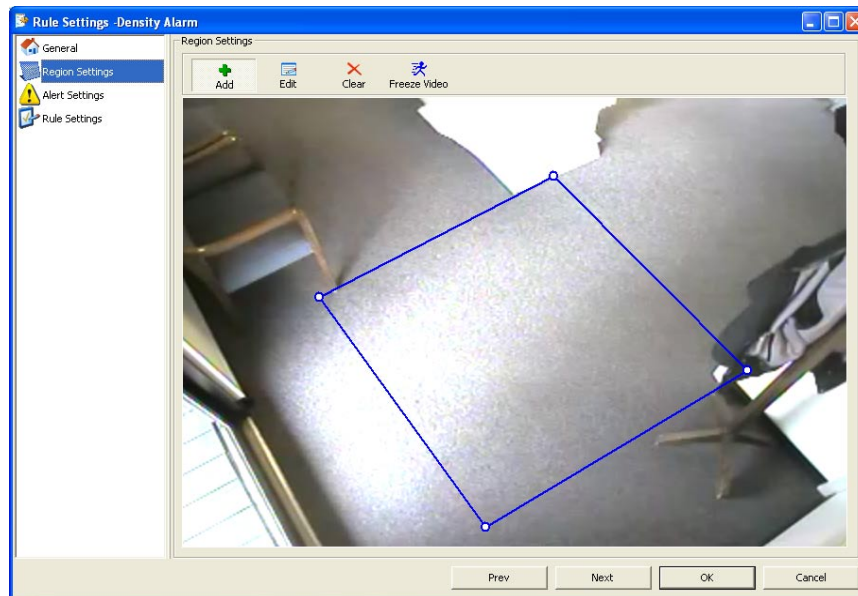


is triggered.

## 1.1.1.2.8 Density Alarm

### 1.1.1.2.8.1 Region Settings


The *Density Alarm* detects motion density by comparing the amount of foreground data to background data within the specified area.



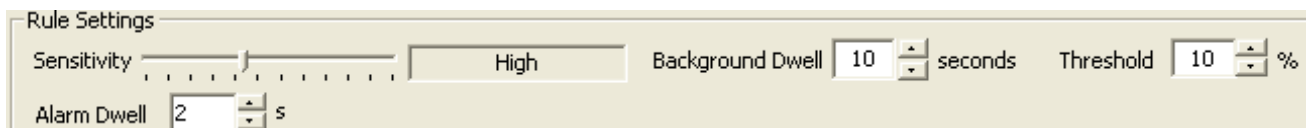
**Add** Click the *Add* button and then click to draw the corners of the region. Click on the original point to complete the region.

**Edit** Click the *Edit* button and then click and drag the corners of the region.

**Clear** Click *Clear* to remove all tripwire settings from the image.

 **Freeze Video** Click the *Freeze Video* button to pause the live video. Click the button again to display live video.

### 1.1.1.2.8.2 Rule Settings



**Sensitivity** Higher sensitivity increases the detection of more subtle changes resulting in more of the image being detected as foreground data.

**Background Dwell**

This is the amount of time required for a non-moving section of the image to become part of the background.

**Threshold**

The threshold is the density percentage required to trigger the density alarm.

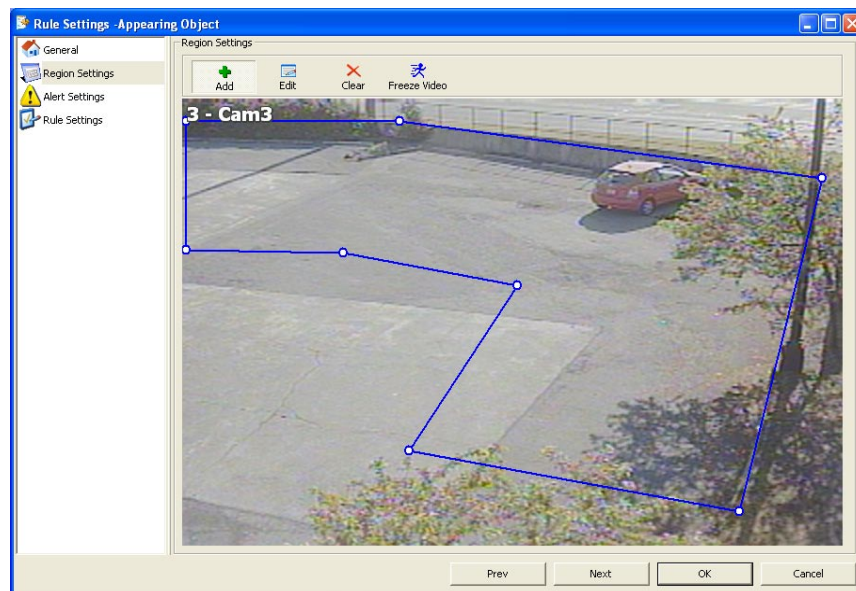
**Alarm Dwell**

The number of seconds of video recorded in alarm mode after the alarm is triggered.

### 1.1.1.2.9 Appearing Object

#### 1.1.1.2.9.1 Region Settings

The *Appearing Object* rule detects objects that appear or disappear in an area. Objects that stay within the area in one spot long enough to become part of the background are detected. The *Appearing Object* rule is designed to work best with a wide angle view. For example, the *Appearing Object* rule could be used in a no-parking zone to trigger an alarm if someone parks there.



**Add**

Click the *Add* button and then click to draw the corners of the region. Click on the original point to complete the region.

**Edit**

Click the *Edit* button and then click and drag the corners of the region.

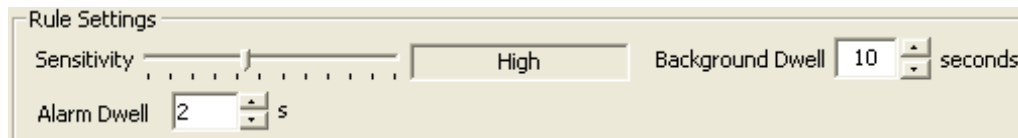
**Clear**

Click *Clear* to remove all tripwire settings from the image.



Click the *Freeze Video* button to pause the live video. Click the button again to display live video.

#### 1.1.1.2.9.2 Rule Settings

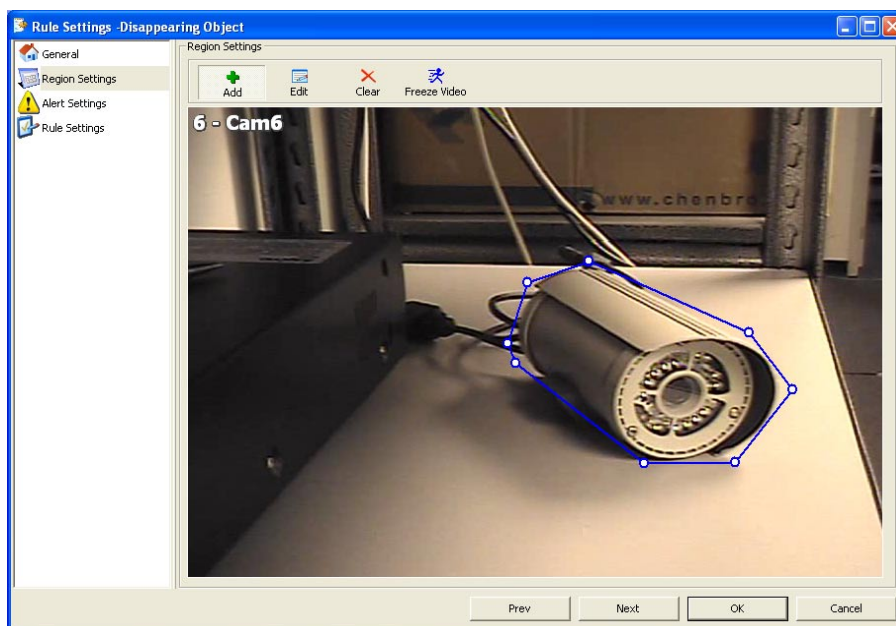


- Sensitivity** Higher sensitivity increases the detection of more subtle changes resulting in more of the image being detected as foreground data.
- Background Dwell** This is the amount of time required for a non-moving section of the image to become part of the background.
- Alarm Dwell** The number of seconds of video recorded in alarm mode after the alarm is triggered.


### 6.1.8.2.2 Disappearing Object

#### 1.1.1.2.9.3 Region Settings

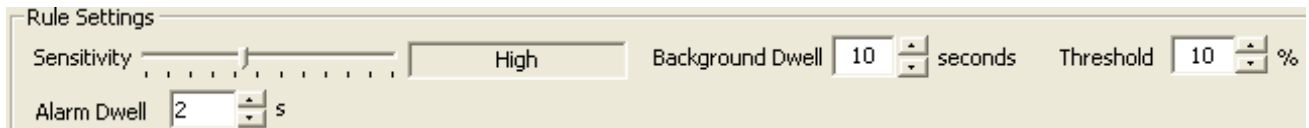
The *Disappearing Object* rule detects objects that disappear from the image. The region for this rule is drawn tightly around the object. The *Disappearing Object* rule is designed to work best with a narrow view. For example, a museum might have a *Disappearing Object* rule configured to trigger an alarm if someone removes a valuable painting.



- Add** Click the *Add* button and then click to draw the corners of the region. Click on the original point to complete the region.

- Edit** Click the *Edit* button and then click and drag the corners of the region.
- Clear** Click *Clear* to remove all tripwire settings from the image.
-  **Freeze Video** Click the *Freeze Video* button to pause the live video. Click the button again to display live video.

#### 1.1.1.2.9.4 Rule Settings

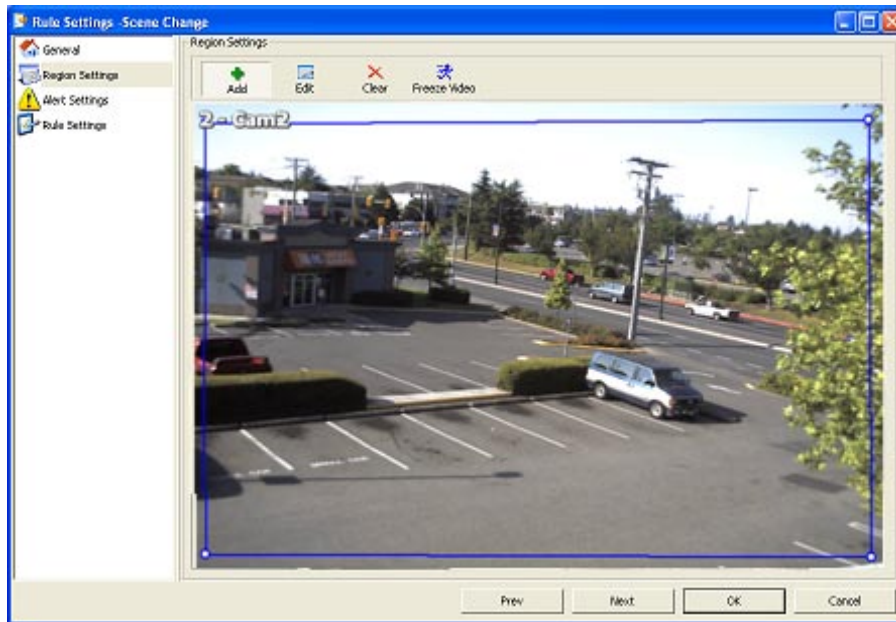


- Sensitivity** Higher sensitivity increases the detection of more subtle changes resulting in more of the image being detected as foreground data.
- Background Dwell** This is the amount of time required for a non-moving section of the image to become part of the background.
- Threshold** The threshold is the density percentage required to trigger the alarm.
- Alarm Dwell** The number of seconds of video recorded in alarm mode after the alarm is triggered.

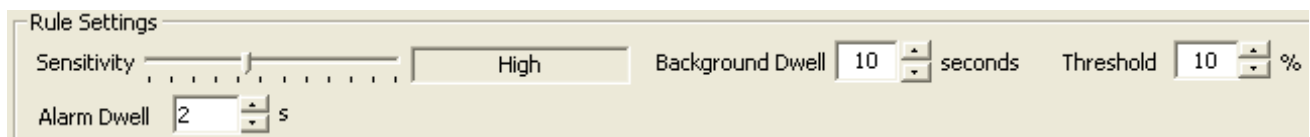
### 6.1.8.2.3 Scene Change

#### 1.1.1.2.9.5 Region Settings

The *Scene Change* rule detects change in scene for cases where the camera is moved. The *Scene Change* rule is designed to detect cameras that have been moved to point in a different direction.



#### 1.1.1.2.9.6 Rule Settings



- Sensitivity** Higher sensitivity increases the detection of more subtle changes resulting in more of the image being detected as foreground data.
- Background Dwell** This is the amount of time required for a non-moving section of the image to become part of the background.
- Threshold** The threshold is the density percentage required to trigger the alarm.
- Alarm Dwell** The number of seconds of video recorded in alarm mode after the alarm is triggered.

### Contact Information

If you require more information, or if you have any questions or concerns, please contact 3xLogic Technical Support:  
 Toll Free (North America): 1-877-3XLOGIC (1-877-395-6442)  
 Email: support@3xlogic.com  
 Online: www.3xlogic.com