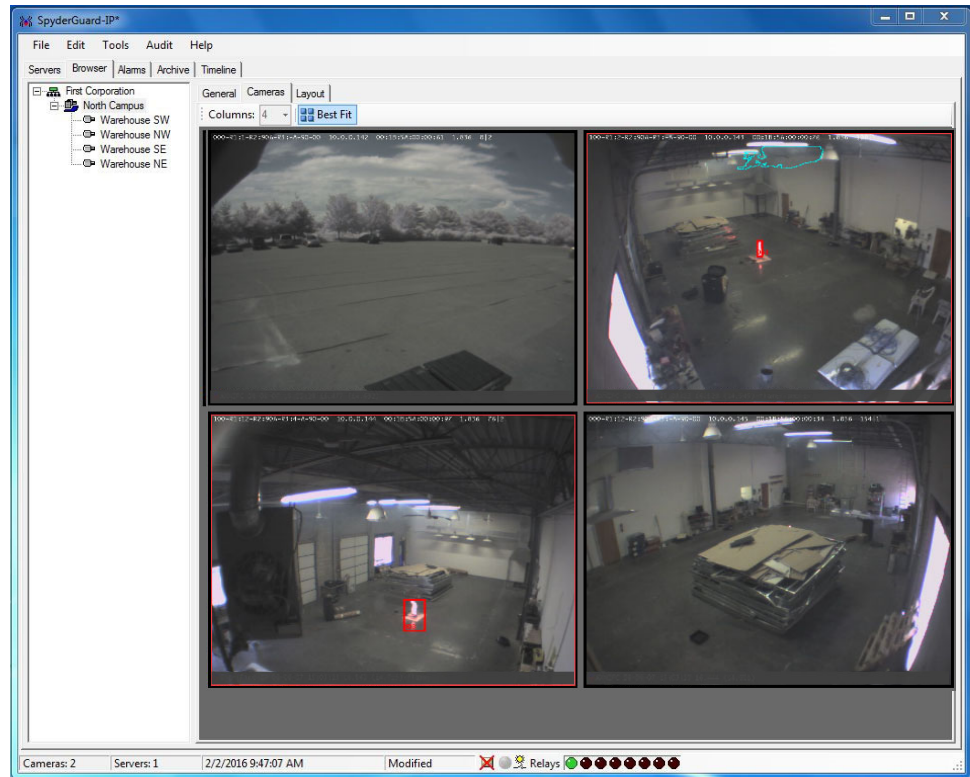


Fike Video Analytics

Video Analytics Software



Quick Start Guide



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Fike[®]
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1.0 GENERAL

1.1 About this Manual

This Quick Start Guide provides a brief overview of the Fike Video Analytics system, including step-by-step procedures on how to configure the Video Analytics software for basic system operation. Steps to fine-tune the system to prevent nuisance alarms are also provided. The information presented here is general in nature to provide an overview of how to use the software at any site, even though your system has been designed to meet the specific fire and security requirements in your location. For site-specific instructions, please review the materials provided by your Fike representative.

This manual is based on the premise that setup procedures for the system's Network Video Recorder (NVR) and cameras (Fike Video Analytics or ONVIF) have been completed. These items are an integral component to the Fike Video Analytics system and must be setup and operational before configuring the Fike Video Analytics software.

For a complete, in-depth overview of the features and functions of the Video Analytics software, refer to the *Fike Video Analytics Software User's Guide*, P/N 06-817.











1.2 Terminology

These terms are used throughout this guide:

Term	Definition
Fike Video Analytics	Proprietary technology for fire and smoke detection utilizing digital imaging devices. May include digital video cameras with embedded firmware or stand-alone processing units capable of processing digital video signals captured by third party devices. May also include systems or devices that are supporting video fire and smoke detection, such as remote operator work stations, video recording/storage systems, and similar systems or devices.
Fike Video Analytics® IP Camera	Refers to the Digital Network Camera (DNR) with embedded fire and smoke detection capabilities.
FSM-IP (NVR)	Fire, Smoke, Motion – Internet Protocol. Refers to the event management and video storage server known also as the Network Video Recorder (NVR).
Server ID	A combination of network name (or IP address) of the server and the TCP connection port used to connect to an FSM-IP NVR.
Operator (guard/user)	A person dedicated to monitoring the facilities. Can be physically located on the premises or, in cases of remote monitoring, can dial into the system from a remote location.
Administrator (admin)	A person with rights to configure the system.
Main Window	The main Fike Video Analytics software page, often called the Landing page because the viewer “lands” there when the software opens.

1.3 Symbols

The following symbols are used throughout this guide to depict status:

	Alarm	Camera is in a general alarm state because of any combination of flame, smoke, offsite, motion, or user activation.
	Disconnected	Network connectivity problem between a server and camera. Camera could not be powered or no valid network path exists between the server and camera.
	Fault	Camera is in a fault state from any combination of content or focus faults.
	Flame	Camera is experiencing a flame alarm.
	Motion	Camera is experiencing a motion alarm.
	Offline	Server is offline.
	Smoke	Camera is experiencing a smoke alarm.
	User	Camera is experiencing a user alarm initiated manually by a guard.
	Maintenance	ONVIF Cameras ONLY! Camera has been placed into maintenance mode.
	Calibration	ONVIF Cameras ONLY! Camera has been placed into calibration mode.

2.0 FIKE VIDEO ANALYTICS SYSTEM OVERVIEW

A Fike Video Analytics system is comprised of at least one IP camera, a FSM-IP Network Video Recorder (NVR), and a monitoring station with the Fike Video Analytics software installed. You can connect any number of IP cameras and NVRs via standard LAN / Ethernet network to expand the system to meet end user needs (limit of 32 cameras per network recorder). Fike Video Analytics IP cameras can be powered by a fire alarm control panel (FACP), an approved security and fire camera power supply with battery backup, or through a supplemental means, such as a Power-Over-Ethernet (POE) switch with battery backup. Figure 1 shows an example of the system's scalable enterprise architecture.

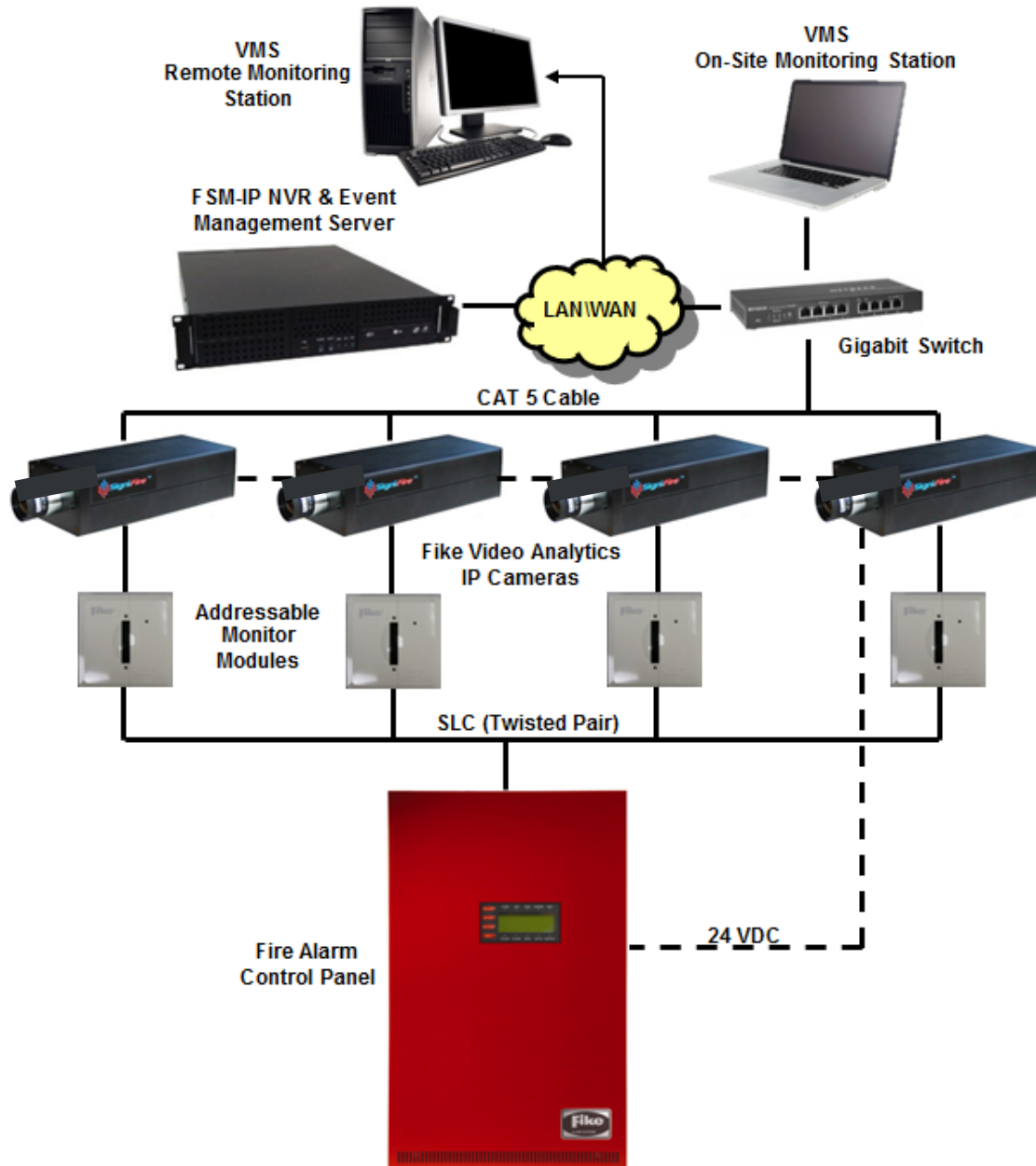


Figure 1: Typical Installation of a Fike Video Analytics System

2.1 FSM-IP Network Video Recorder

The Fike Video Analytics system comes with a video management system known as a FSM-IP Network Video Recorder* (NVR) (Figure 2). The NVR stores video alarms from the Fike Video Analytics IP cameras and acts as an information conduit between the monitoring station and the cameras themselves.



Figure 2: FSM-IP Network Video Recorder

There is no predetermined limit on the number of cameras and NVRs that can be deployed on one network; however, performance can be greatly affected by bandwidth limitations on a network. As a general rule, it is not recommended to put more than 32 cameras in one subnet and single NVR unit. In larger installations that exceed that limit, groups of up to 32 cameras should be clustered around a single NVR.

Multiple NVRs can be monitored from one monitoring workstation. The number of NVRs that the monitoring station can handle is unlimited, and built-in smart bandwidth management limits the network video transfers to only those channels currently observed by the operator; therefore, there is no deterioration of the frame rate observed by the operator.

2.2 Monitoring Station Requirements

The Fike Video Analytics software can be installed on almost any Windows-based PC workstation that meets or exceeds the following specifications and that is connected through a standard IP network connection:

Minimum:	Recommended:
1GB RAM	2GB RAM
10GB HDD available disc space	10GB HDD available disc space
1024x768 pixel screen resolution	1024x768 pixel screen resolution
True Color video adapter	True Color video adapter
Windows XP, SP3 or newer	Windows 7
	Sound card

*Refer to Fike document P/N 06-52, *Installation and Operation Manual, FSM-IP Network Video Recorder*, for additional information.

3.0 USER INTERFACE OVERVIEW

The Fike Video Analytics software is a customizable surveillance and alarm monitoring application that can work with one or more FSM-IP server installations. What makes the software unique is its ability to configure access to video channels based on the organizational, geographical, and topological structure of the organization. The advantage of this configuration is that the guard can navigate the system across the facilities using simple terms, such as sites, buildings, levels, suites, etc., as opposed to servers and channel numbers.

3.1 Main Window and Tabs

All major functions are accessible through the Main Menu (Figure 3). The working area of the main window consists of five tabs, each encompassing the specific functions of the system.

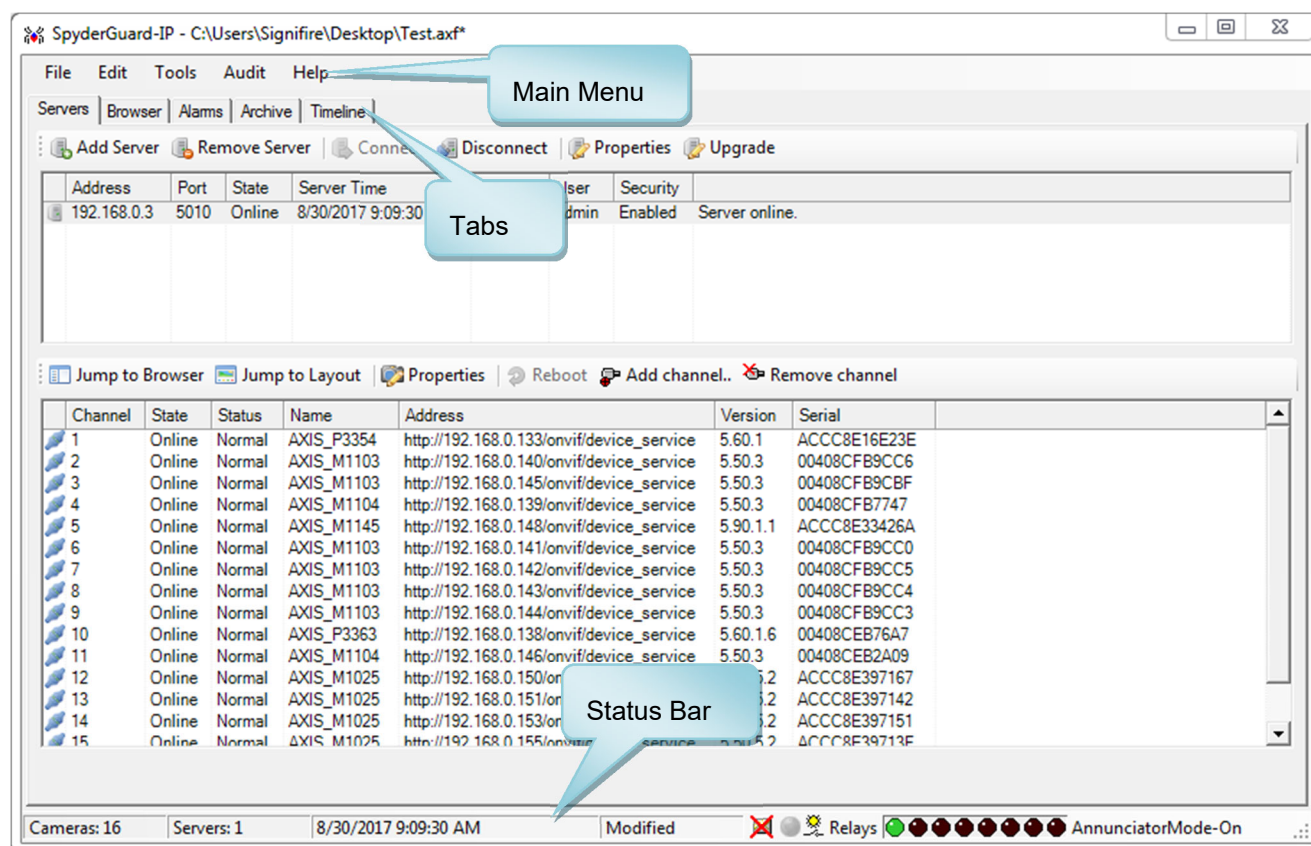


Figure 3: Fike Video Analytics software Main Window Layout

The five main tabs include the following views:

Servers	Provides access to system components that include FSM-IP servers and their respective video channels.
Browser	Used to access the video organizational structure and related video feeds.
Alarms	Provides direct access to all alarms registered by the system. A video of a channel responsible for the alarm will automatically appear in this view. The software may be configured to maximize the window as new alarms come along and switch to the Alarms view.
Archive	Allows users to search through past alarms, as well as view and/or download previously recorded videos.
Timeline	Displays the recorded alarms in a graphic chart and allows replay of pre-recorded videos, including those channels and time periods not under alarm conditions.

4.0 GETTING STARTED

In this chapter we will perform step-by-step configuration of the system. The first and most obvious step to configuring the system is to ensure the cameras and NVR are connected to the network, are fully operational, and can be easily accessed. If you have questions or need further details, please refer P/N 06-523, *Installation and Operation Manual, Fike Video Analytics FVA-IP Camera*.

4.1 Starting the Fike Video Analytics Software

The Fike Video Analytics software can be launched from the Start button by navigating to Start/All Programs/Fike Video Analytics/SpyderGuard-IP or by clicking on the SpyderGuard icon on the desktop. Once launched, the application will open a Main Window with all views empty (Figure 4). The software monitoring file needs to be created and saved for later use.

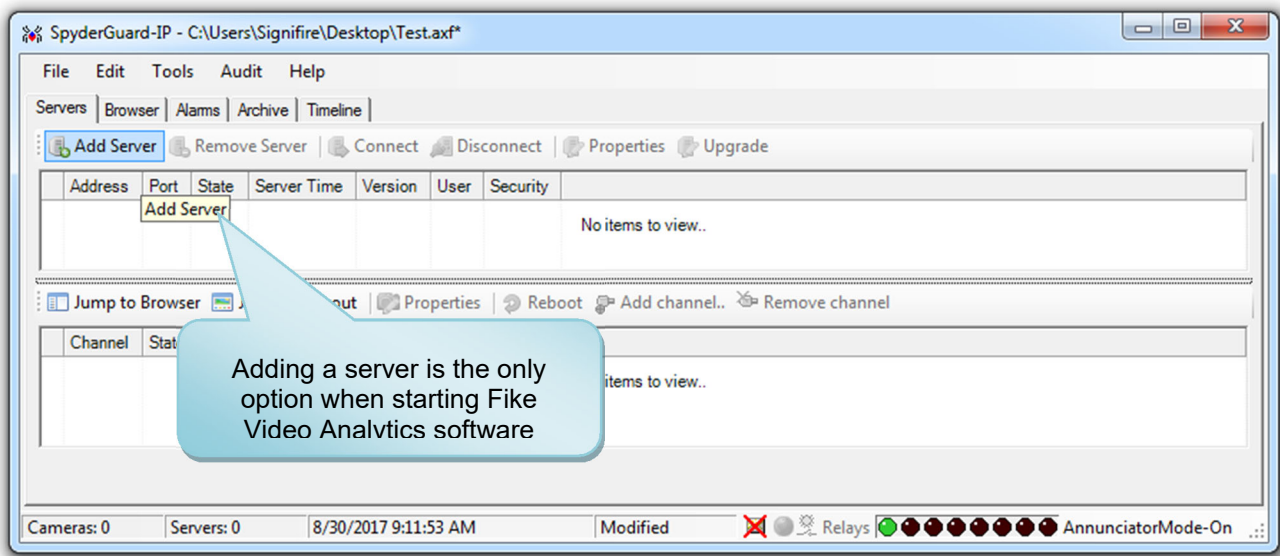


Figure 4: Fike Video Analytics software Main Window with no Connection to the Server(s)

Clicking the *Add Server* button will open the *Server Editor* dialog box (see Figure 5).

Enter either the server's IP Address or its accessible DNS hostname. If installing the Fike Video Analytics software on the same computer system where the NVR is currently running, use the loopback address 127.0.0.1 or the system's static IP address. The Server Port Number should be left at default (5010) and the User needs to be set to Administrator so he or she can perform necessary system configurations. By default, the server is configured with security access turned off so the password should remain blank.

Figure 5: Server Editor Dialog Box

After entering all necessary fields, click on the *Save* button to go back to the main window. The newly connected server will appear in the *Servers* view. If Fike Video Analytics software is unable to connect to a server, the error message *Invalid IP or host name* will appear. Please verify the address and connectivity to the server to resolve the situation.

4.2 Adding Video Channels

The newly connected server will now appear on the servers list of the *Main Window* (Figure 6). Select a server by clicking on it. If the *Channel* list appears populated after you have selected a server, the server has been pre-configured and you can skip this step. However, when the server is shipped from the manufacturer, it is not configured to connect to any cameras and the channel list will have no entries. To proceed further, add channels to the server.

Address	Port	State	Server Time	Version	User	Security	
192.168.0.3	5010	Online	8/30/2017 9:14:54 AM	4.7.8.14	Admin	Enabled	Server online.

Channel	State	Status	Name	Address	Version	Serial
1	Online	Normal	AXIS_P3354	http://192.168.0.133/onvif/device_s	5.60.1	ACCC8E16E23E
2	Online	Normal	AXIS_M1103	http://192.168.0.140/onvif/device_s	5.50.3	00408CFB9CC6
3	Online	Normal	AXIS_M1103	http://192.168.0.145/onvif/dev		8CFB9CBF
4	Online	Normal	AXIS_M1104	http://192.168.0.139/onvif/dev		8CFB7747
5	Online	Normal	AXIS_M1145	http://192.168.0.148/onvif/dev		C8E33426A
6	Online	Normal	AXIS_M1103	http://192.168.0.141/onvif/dev		8CFB9CC0
7	Online	Normal	AXIS_M1103	http://192.168.0.142/onvif/device_service	5.50.3	00408CFB9CC5
8	Online	Normal	AXIS_M1103	http://192.168.0.143/onvif/device_service	5.50.3	00408CFB9CC4

Figure 6: Fike Video Analytics software connected to an NVR that has been preconfigured with channels

To add channels, select the *Add channel* button. In the *Select Available Camera* dialog window (Figure 7), pick and select the Fike Video Analytics IP camera(s) you would like the server to connect to and click OK. Multiple cameras can be selected and added. After closing, the server will disconnect and reconnect again in a few seconds, and the newly added channels will be listed in the bottom pane.

Note: Before adding ONVIF cameras to the server, the resolution of one of the camera's streams must be adjusted to a maximum of 640 x 480 at 15 frames per second (fps) to ensure top system performance. Axis cameras have an ONVIF profile that must be used and adjusted accordingly. Bosch cameras must use the stream labeled "SD" (Standard Definition) 480p. The profile used must be labeled to include the word "Fike." Other camera manufacturers will have camera streams labeled 640 x 480 available.

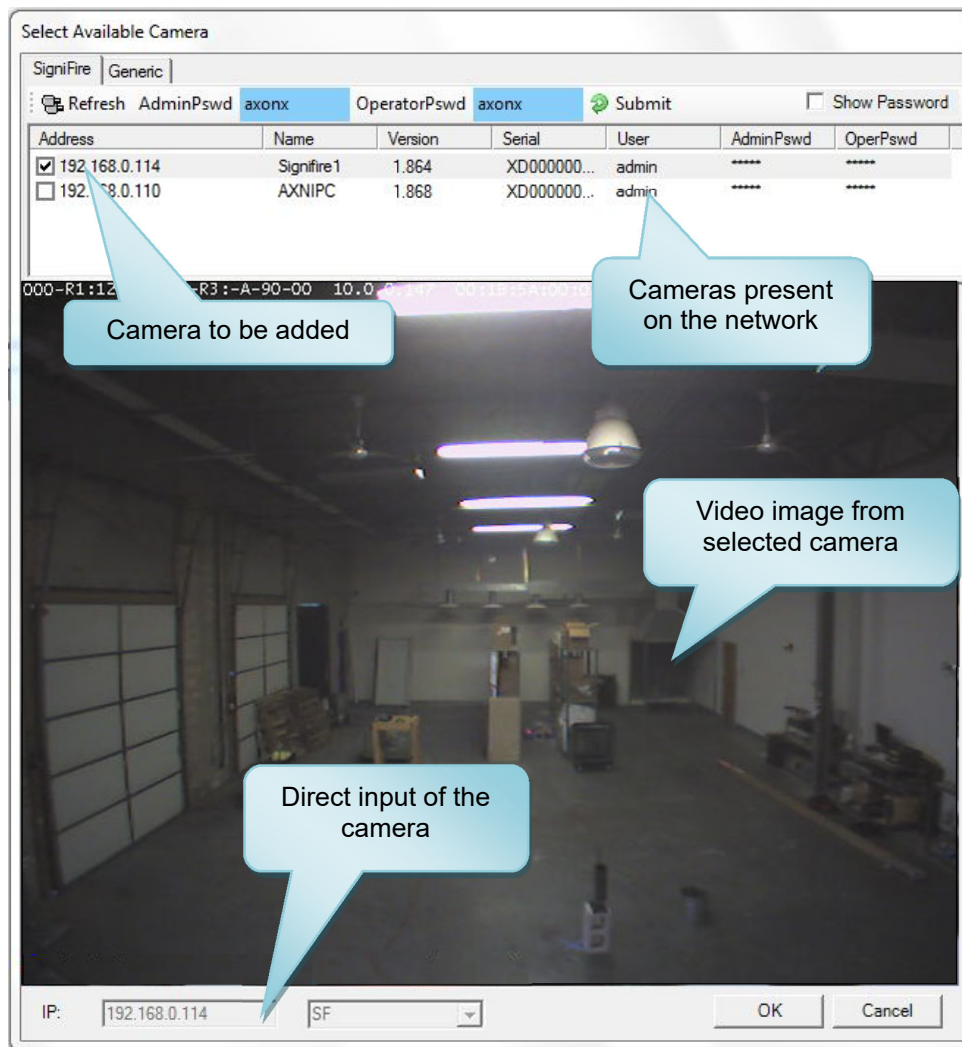
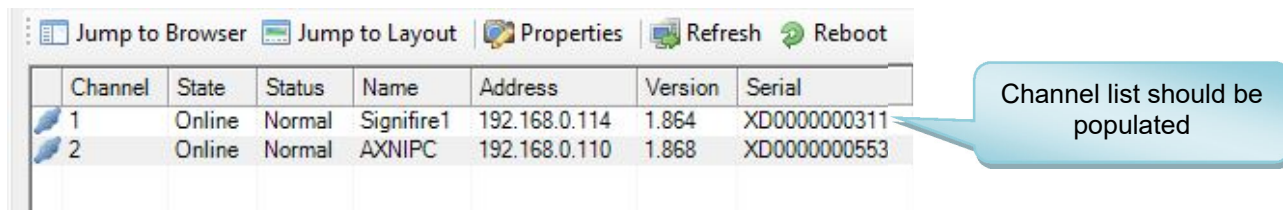


Figure 7: Selecting Camera Dialog

These steps can be used repeatedly as needed. The cameras that are already added to the server will not be listed in the selection box. At the end of this step, when the server is selected, the channel list will be populated listing the chosen video channels along with respective status and attributes (Figure 8).



Channel	State	Status	Name	Address	Version	Serial
1	Online	Normal	Signifire1	192.168.0.114	1.864	XD0000000311
2	Online	Normal	AXNIPC	192.168.0.110	1.868	XD0000000553

Figure 8: Channel List

A graphic will reflect the state of a channel, followed by the Channel Number, Connection State (Online/Offline), Status (Flame, Smoke, etc.), Camera Name, IP Address, Firmware Version, and camera Serial Number.

Warning: To browse for available cameras, Fike Video Analytics software uses UDP broadcasting protocol. Some routers and firewalls may prevent this communication, making the list empty.

If you know the IP address of your camera, you may enter it in the IP field at the bottom of the camera selector dialog window (Figure 9). Click OK to add the camera to the system.

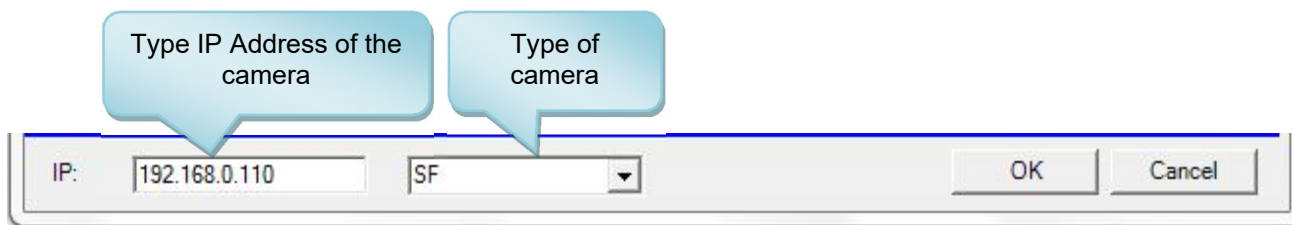


Figure 9: Adding Cameras Manually

4.3 Setting up the Organization Tree

Now that the server is configured, the next step is to set up a viewing structure. Switch to *Browser* view, select the *General* tab, right-click on the organization structure area (Figure 10), and select *New>Organization* on the pop-up menu.

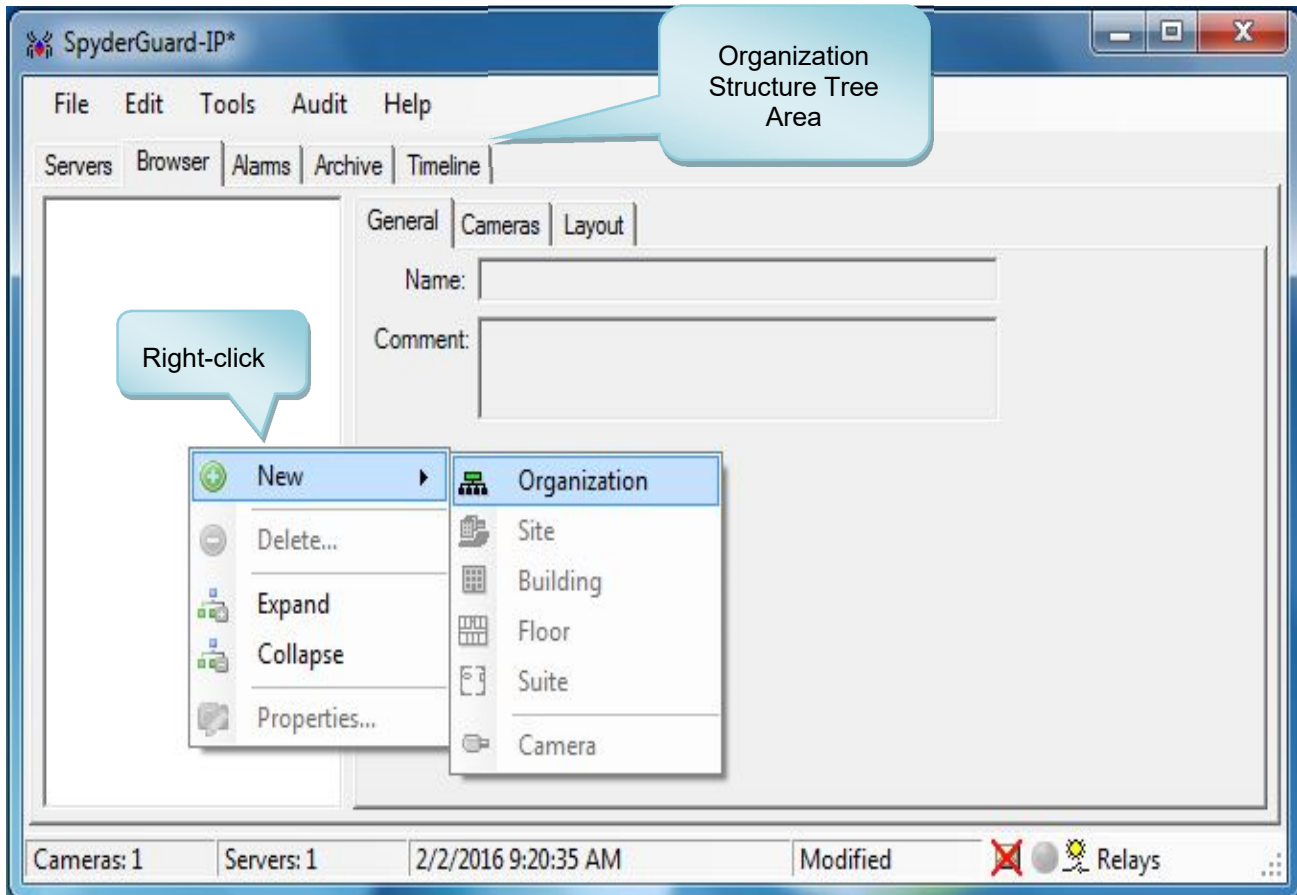


Figure 10: Adding Organization Structure using pop-up menu in Organizational Structure Tree Area

The system will respond by inserting an Organization node in the tree view pane and enabling the Name/Comment fields in the *Editor Area* (Figure 11). Enter the relevant organization name and optional comment. In the example below, name the organization *Organization #1*.

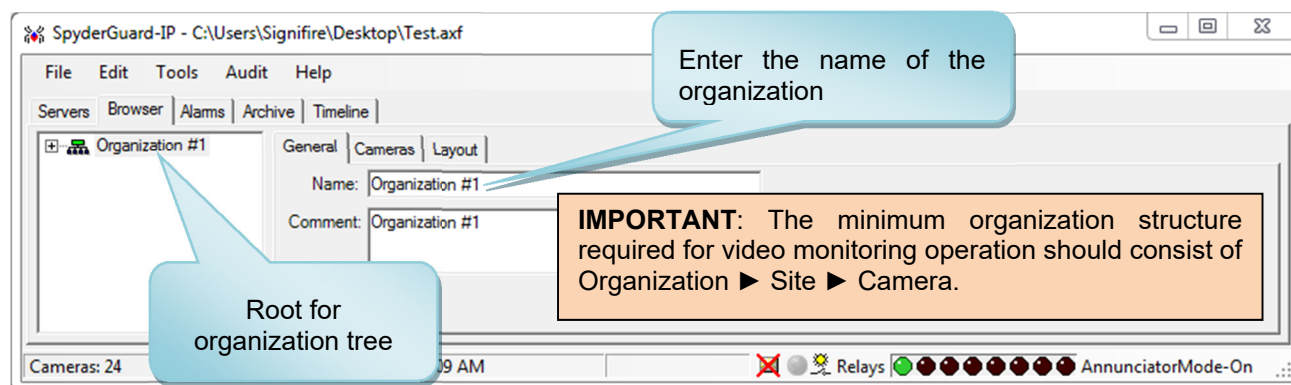


Figure 11: Edit Organization Fields

The next step is to set up the site. To do that, right-click the organization node, select *New>Site* and give it a meaningful name/comment. A site has additional fields that may be helpful for the remote operator, including address and contact information in case of emergency (Figure 12). In this example, the site is named *Site #1*.

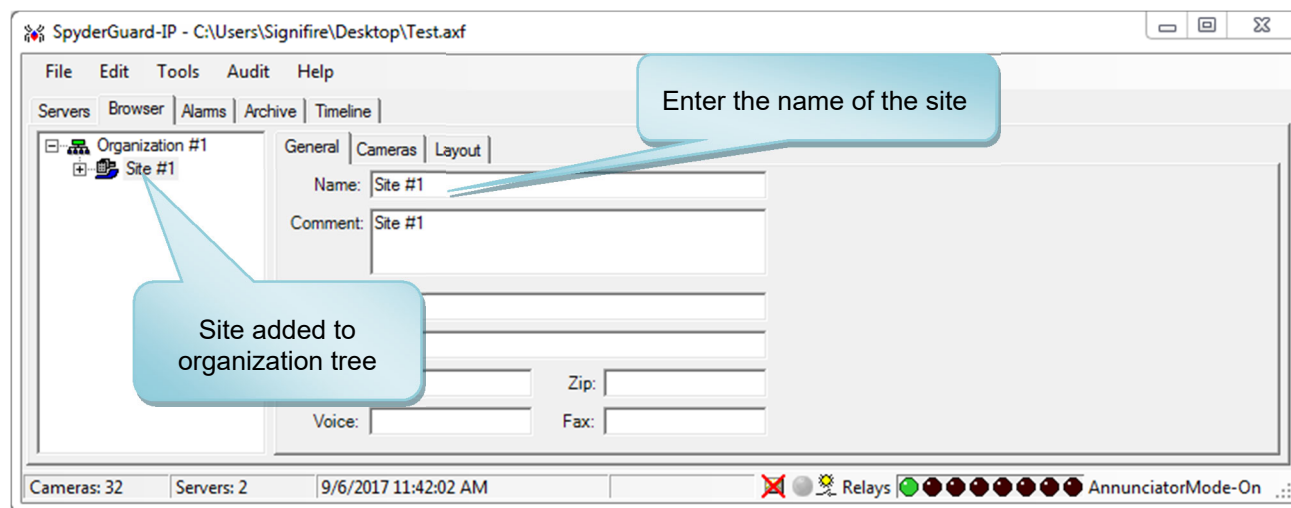


Figure 12: Edit Organization Fields

Depending on the complexity and size of the monitoring facility, a complete organizational structure can have multiple sites, with each having multiple buildings, floors, and suits; on the other hand, a minimalistic structure containing an Organization and Site is sufficient to start adding cameras. Each node in the organization may be associated with a graphic such as floor plans, satellite photos, logos, etc.

4.4 Adding Cameras to the Organization Tree

The video camera nodes can be added to any node in the organization tree except the organization root. To add a camera, right-click the node to which the camera will belong and select Add → Camera on the pop-up menu. That will create a camera object node in the organization tree and change the view pane (Figure 13).

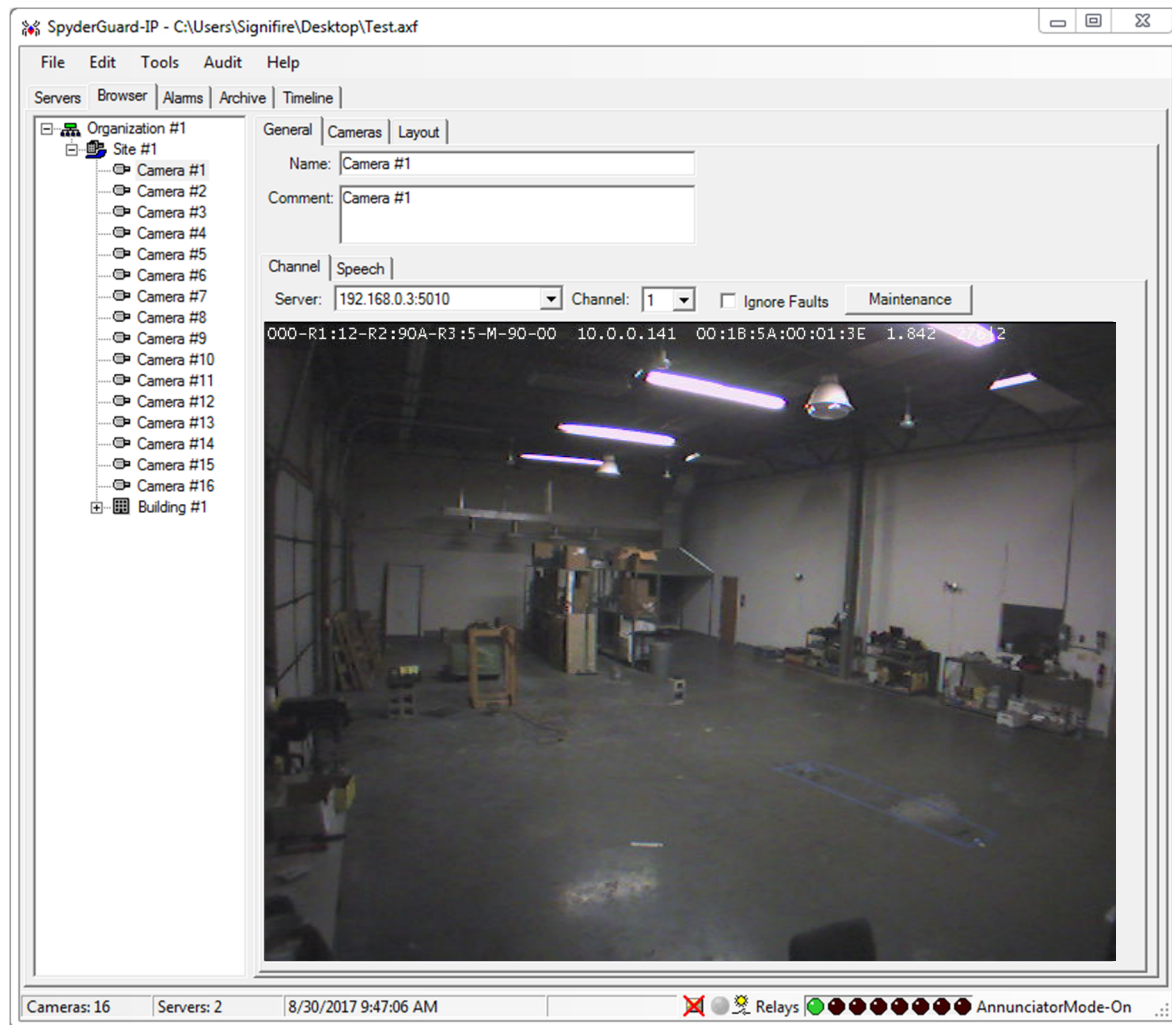


Figure 13: Adding and Setting up Camera

In our example, after adding a camera to the Organization Tree, we have a structure that contains *Organization #1* as the organization, *Site #1* as the Site, and *Camera #1* as the video camera (Figure 13).

4.5 Channel Settings

Select the NVR server and a channel to act as a video source of the camera object. Enter the name of the camera as it will appear on the Organization Tree, and Comment which is the text that will be used to refer to this video channel when the voice annunciation message plays during an alarm.

4.6 Speech Settings

You can customize the ways the Fike Video Analytics software will annunciate the alarm on this channel using the computer's built-in speech synthesizer. Switch to the *Speech* tab and fill out all necessary fields (Figure 14).

The figure shows a software window titled 'Speech Settings'. It has two tabs: 'Channel' and 'Speech'. The 'Speech' tab is selected. Inside the 'Speech' tab, there are two sliders: 'Volume' and 'Speed', both ranging from 'Min' to 'Max'. Below the sliders is a 'Test' button. To the right of the sliders is a 'Voice' dropdown menu showing 'Microsoft Anna - English (Uni)'. Below the voice menu is an 'Alarm Filter' section with a list of alarm types: 'fire', 'smoke', 'offsite', 'motion', and 'fault'. Each type has a checked checkbox next to it. At the bottom right, there is a 'Mute' checkbox which is currently unchecked.

Figure 14: Speech Settings

Note that in most cases you may simply go with the default settings. You can control the speech volume and speed, the voice by using one of the system voices, and the kinds of alarms that are annunciated. Press the Test button to hear voice samples of how the computer-generated voice will sound. You can also activate or mute voice annunciation by checking or unchecking the Mute box.

4.7 Cameras Tab

The video channels originated from the selected node and its children are all visible at once on the *Cameras* tab (Figure 15). At this point, live video images transmitted by multiple cameras can be verified by switching to the Cameras tab. Selecting different nodes on the organization tree at this point will cause the display to show cameras that are part of the entity being selected. For example, selecting the organization will cause all the cameras within the organization to be placed in the camera display window.

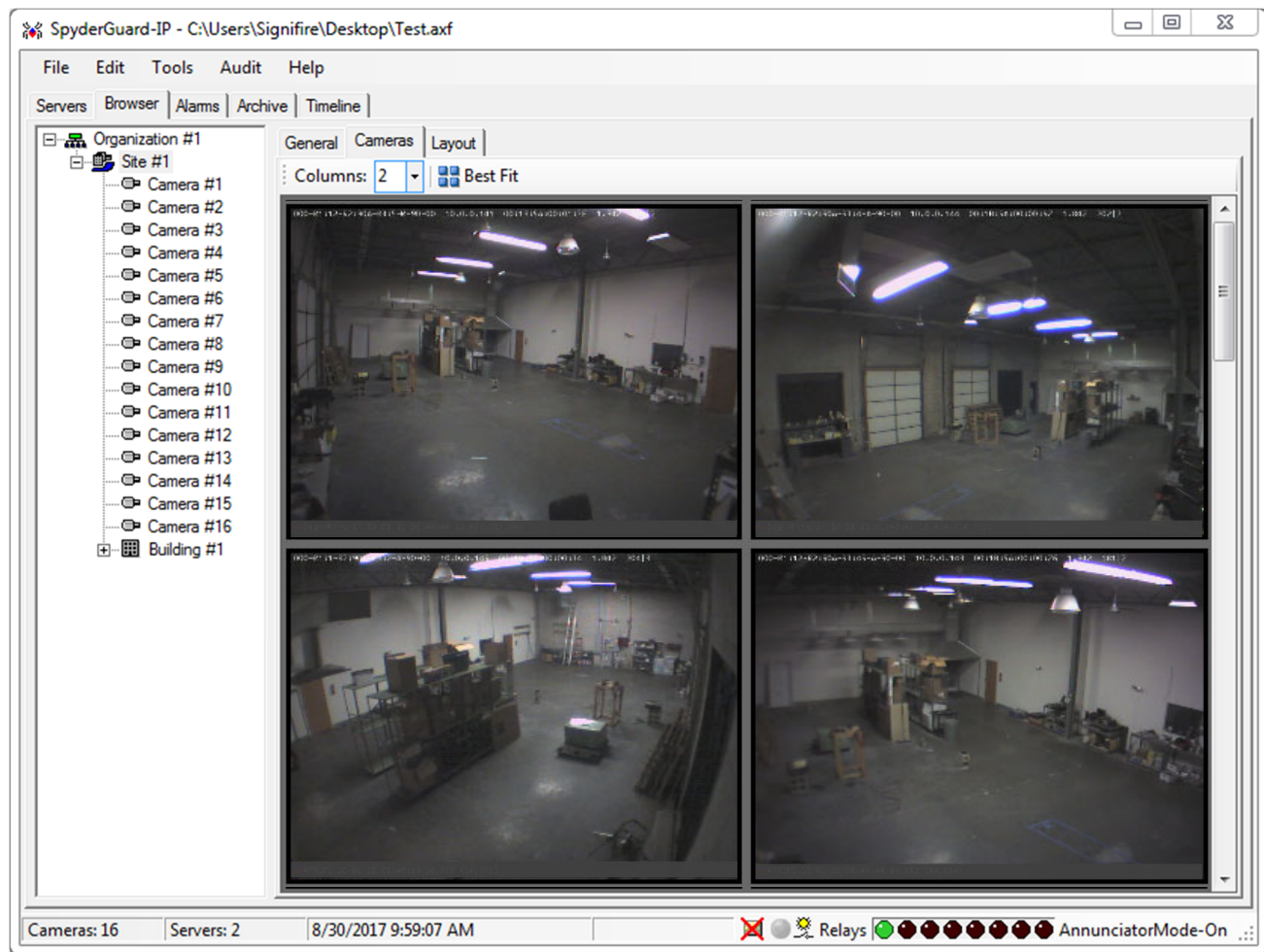


Figure 15: Cameras View for Selected Node

4.8 More Elaborate Organizational Structures

As we have already learned in previous sections, the organizational tree should have at least Organization, Site, and Camera nodes at minimum. For convenience of operation, the *Organizational Structure Tree* should closely reflect your organization. Fike Video Analytics software offers five structural levels to achieve optimal structural organization, which typically begin with the parent organization and a hierarchy of child relationships that include:

- Sites
- Buildings
- Floors
- Suites / Areas
- Cameras

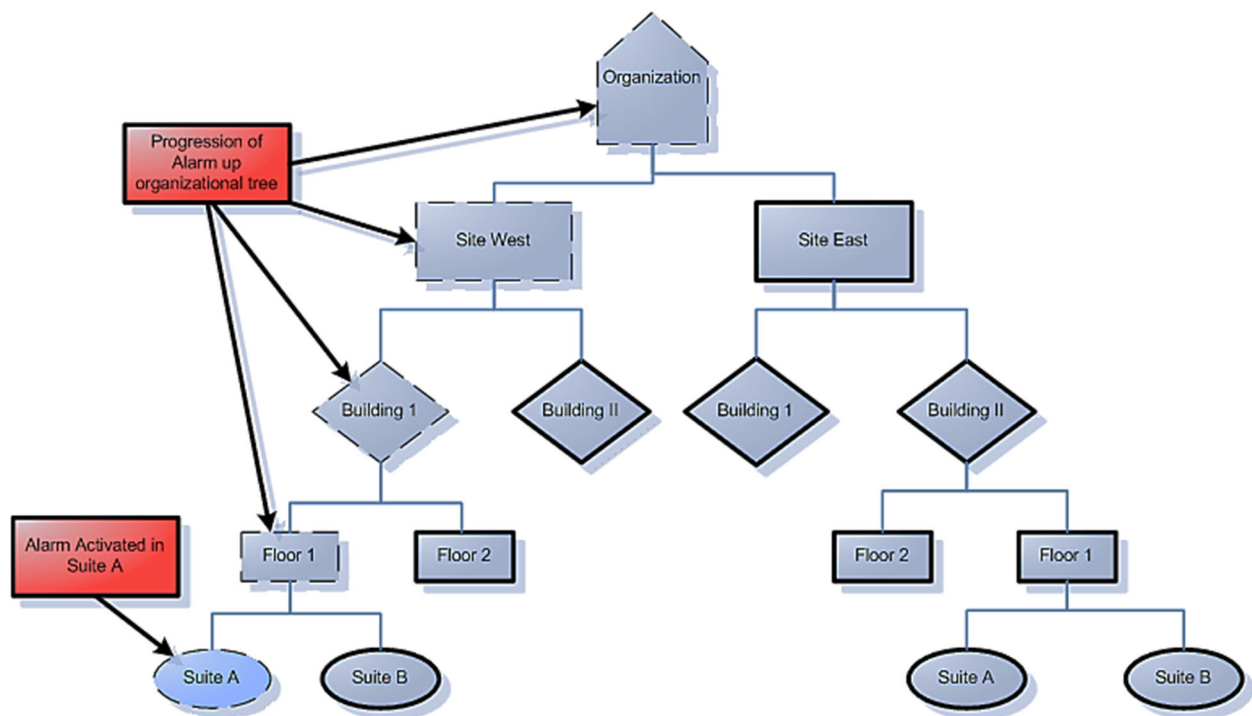


Figure 16: Block Diagram of Organizational Structure

Figure 16 shows a typical hierarchical structure. **Note the relationship between various child/parent nodes in the organization tree.**

In this example, “Organization” is the Parent to child relationships “Site West” and “Site East.” “Floor 1” and “Floor 2” are child relationships to “Building 1.”

To get started, you will need to build an organization node in the organization tree. Once you have defined the related nodes in your organization tree, you will add camera objects (video sources) to the appropriate nodes.

4.9 Layout Tab

Any element of the organization tree except a camera can have a graphical layout associated with it that can be observed from the Layout Tab. This view will initially be empty, but will populate once you add cameras.

4.10 Background Image

You can set up the background image for the layout view. Use the *Set Background* button or right click the work area and select *Set Background Image* on the properties menu. The standard file selection dialog box will prompt for the image file that will be used as a background (Figure 17). If the selected organization tree element has camera objects as children, the image will be overlain with iconic camera designators; otherwise, each child object will be highlighted by rectangles. The position, orientation, and area of each of the designators can be changed, as can the position and size of the rectangular highlights.

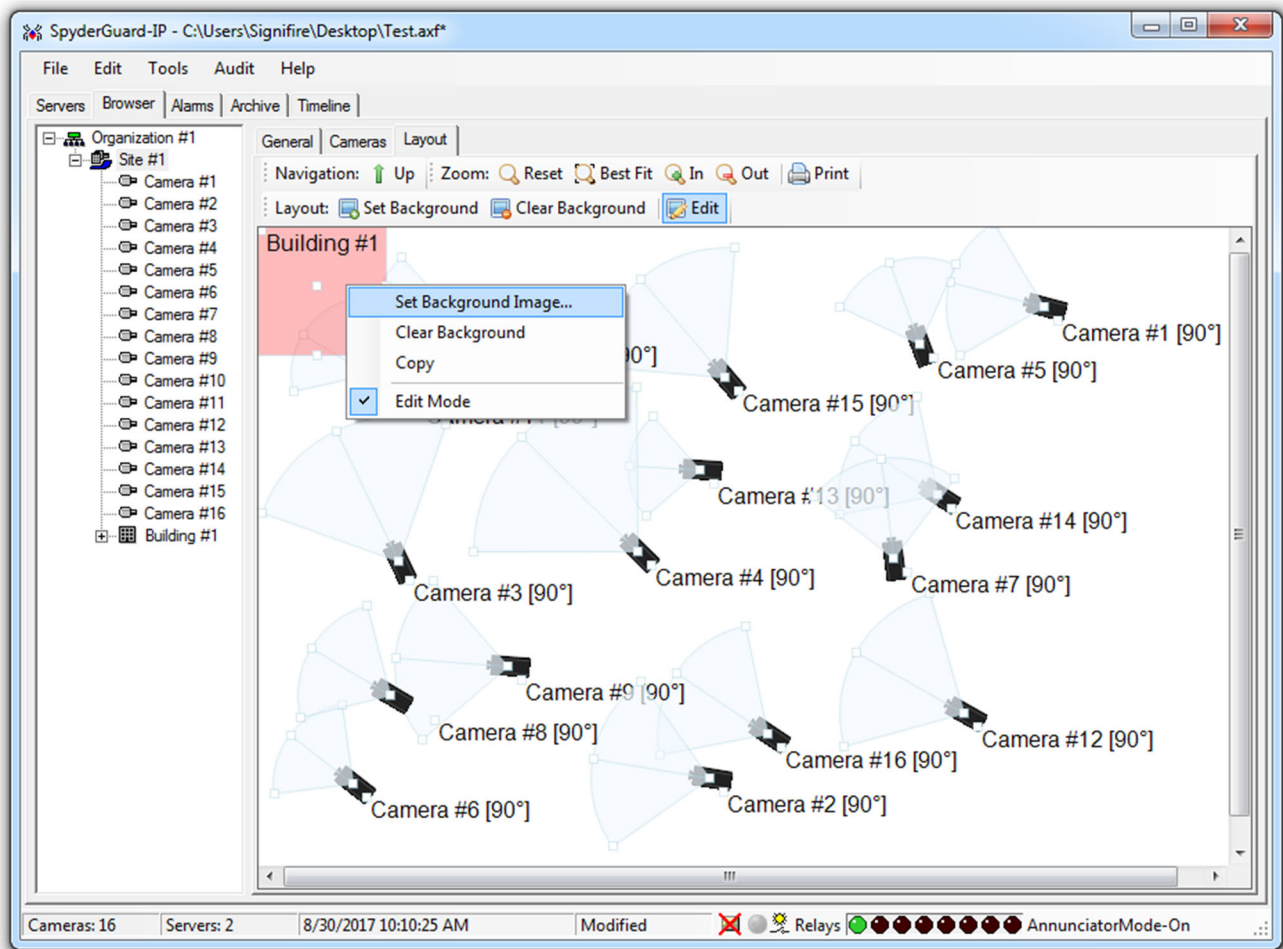


Figure 17: Adding Image to Layout View

4.11 Configuring Camera Designators

Now that the image (floor plan) has been uploaded, you can move the camera designators to reflect actual camera locations, orientations, and coverage areas (Figure 18). Initially the camera designators are locked in place. In order to unlock the designators, turn on the edit mode using the *Edit* toolbar button. Now the designators can be moved, resized, and rotated. The coverage area can also be manipulated to reflect the lenses used on the cameras.

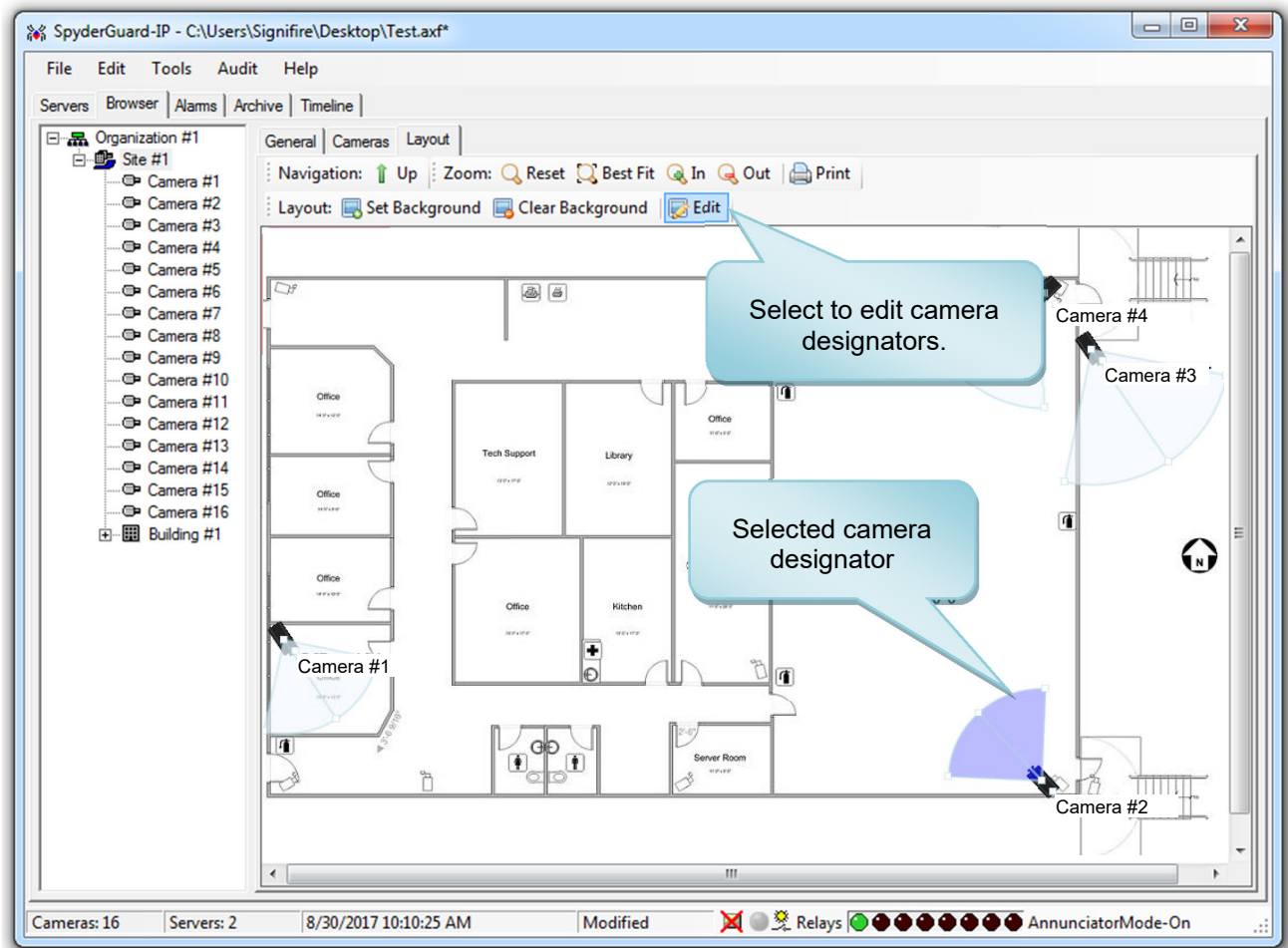


Figure 18: Floor Plan with Camera Designators. Currently Selected Designator is Highlighted.

4.12 Saving Configuration in a File

At any time the configuration that we are building can be saved in a Fike Video Analytics software file (extension *.axf). To save a file use *File/Save As* and select the location where the file will be saved. Previously saved configurations can be loaded using *File/Open*. Now the system is setup for basic operations.

5.0 DETECTING EVENTS

In order to remedy nuisance activations, Fike Video Analytics allows you to create zones to define certain regions of the camera image for event monitoring. Each zone, once created, provides special treatment to events that originate within the defined zone based on programming. The following table identifies the different modes and event types that a zone can be programmed for.

Mode	Event Type	Action
Detect	Flame Motion Offsite Smoke	<p>The system is detecting in the entire field of view and will track any potential event that may cause an alarm. By creating a detect (alarm) zone, you are telling the system where the event must take place, or move into, to activate an alarm.</p> <p>By default, the detect zone for each camera is always on and encompasses the entire camera image. Once a new detect zone is created, the camera will only go into alarm if the event is at least partially within the zone. If multiple detect zones are active, the alarm will occur if the event is at least partially in any of the zones.**</p>
Block	Flame Motion Offsite Smoke	<p>Event type will cause an alarm everywhere except the created zone(s).</p> <p>By default, no blocking zones are present on a camera. Blocking zones must be created to suite the specific project application. If one or more blocking zones are created, the alarm will occur only if the event occurs anywhere outside the blocking zone(s).**</p>
<i>**If there are blocking and detect zones present at the same time, the alarm will occur only if the event is detected in the area of the detect zone(s) with exclusion of the blocking zones. It is not recommended that both blocking and alarm zones are used at the same time.</i>		

By factory default, no zones are set up in the camera(s). Cameras will detect and record all flame, offsite and smoke events across the entire camera image. However, motion detection is unique in that a *detect* zone needs to be set up for the motion algorithms to be active. *Detect* zones are areas of the camera image where the system will be watching for changes and generating the appropriate alarms.

Multiple zones can be assigned to each camera image with each zone being algorithm dependent. For example, a flaming fire within a smoke blocking zone will still be detected by the camera. A second flame blocking zone would have to be created to block the flame alarm from occurring. It is important to note that by adding blocking zones to the camera you are reducing the effective coverage area of the camera.

Zones can be scheduled to become active or inactive for certain times/days/months. To do so you will need to create a schedule for each zone. Schedules will be covered in the next chapter. With no schedules present for the zone, the zone will always be in the active state.

Summary of Zoning Features

- Each zone is independent
- Each zone blocks the alarm not the algorithm process
- Each zone is specific to the event type (flame, motion, offsite, smoke)
- Each zone can be given its own schedule
- The zones do not work together to mask a cumulative area

5.1 Setting up Zoning

Setting up zones involves opening the *Channel Settings* interactive form (Figure 20). There are two ways to achieve that. One involves selecting the desired channel in the *Server* tab on the main menu and clicking on the *Properties* button. The alternative is to right-click the desired channel on the Organization Tree and select *Properties* on the pop-up menu (Figure 19). The system will react by opening the Channel Settings window in which we will use the *Zones* tab to create a new zone. Here the view contains all created zones overlaid on the video image.

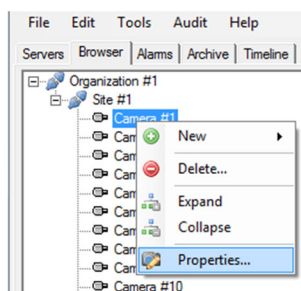


Figure 19: Channel Properties

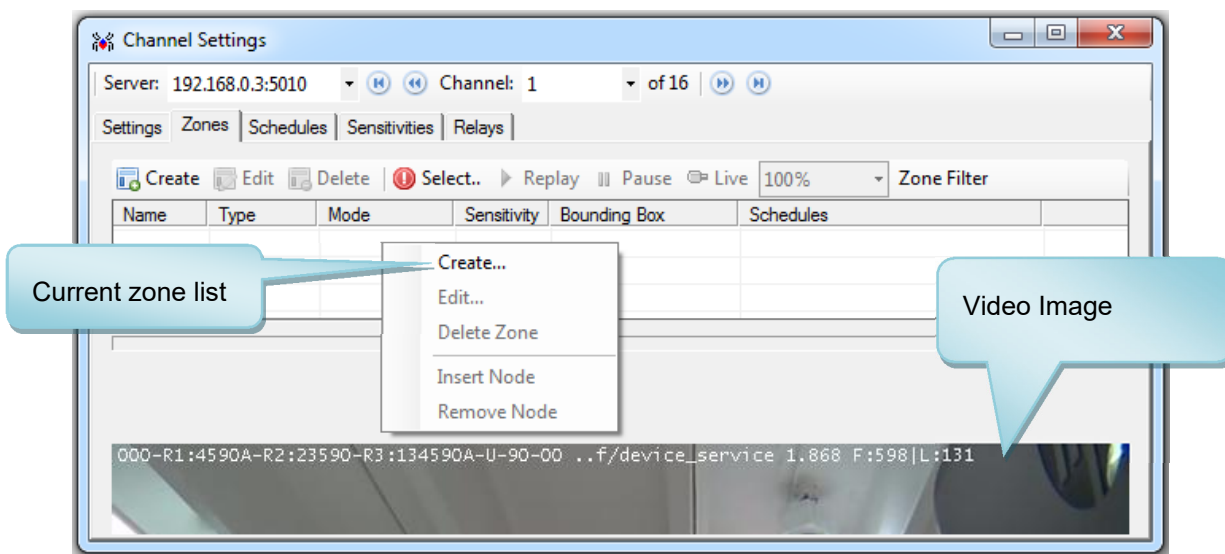


Figure 20: Creating Zones

Right click on the zone list area and select *Create* to add the zone on a channel or click the *Create* button on the toolbar. The result of this operation will be a Zone window (Figure 20) that will open with default fields. Fill out the fields in the form.

As an example, Figure 21 shows how to create a motion zone. The zone is assigned a unique name of "Motion_1" and is assigned a sensitivity setting of 50. A rectangular shape is used to define the zone in this example. Click **Save** to create the motion zone and return to the *Channel Settings* window.

The image shows a 'Zone' configuration window. It contains the following fields and controls:

- Name:** A text input field containing 'Motion_1'.
- Mode:** A dropdown menu with 'detect' selected.
- Sensitivity:** A numeric input field with '50' and up/down arrows.
- Type:** A dropdown menu with 'motion' selected.
- Shape:** A dropdown menu with 'rectangle' selected.
- Points:** A text input field containing '10,9, 10,469, 630,469, 630,9'.
- Schedules:** An empty text area for scheduling.
- Buttons:** 'Cancel' and 'Save' buttons at the bottom right.

Figure 21: Zone Edit Window

Name:	Enter a unique and meaningful name for the zone (no spaces allowed).
Sensitivity:	Defines how sensitive a motion zone is to motion (0 – 3000). Default setting is 50. Lower is more sensitive and higher is less sensitive. Not applicable to other event types.
Shape:	Defines the shape of the zone (rectangle or polygon).
Mode:	Determines the role of the zone (block or alarm).
Type:	Determines the event type the zone will react to (flame, motion, offsite, smoke).
Points:	Defines the display coordinates for the zone.
Schedules:	If assigned, determines when the zone will be active.

Now the video image should display the motion zone and the zone list will contain the single newly created zone (Figure 22). You may move or resize the zone by dragging the geometry control handles. Standard practice is to place the zones in the areas of the image that make sense to monitor for motion such as doors and passages, while avoiding areas where motion may naturally occur but doesn't need monitoring, such as windows or around equipment.

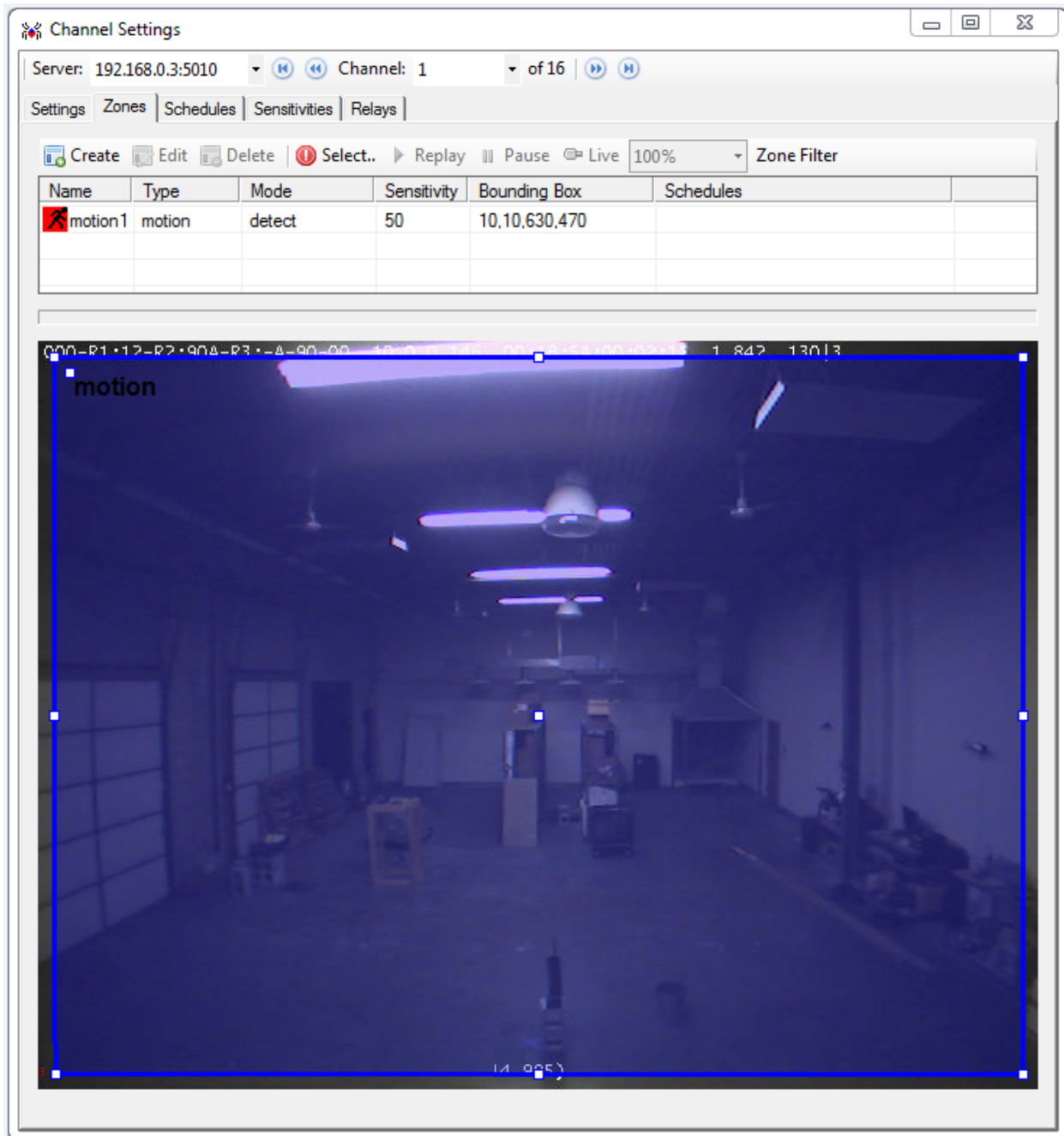


Figure 22: New Motion Zone Created with Defaults


At any time you can edit the selected zone setting by clicking the  **Edit** button. In our example (Figure 23) we set up two motion zones. Utilizing the *Shape* field¹ in the *Zone Edit* window, a rectangular shape is created to define the first motion zone around the man door, while a polygon shape is created to define the second zone around the loading dock port. Now that motion zones have been set up, the Video Analytics software (Fike Video Analytics software) should respond to any intrusions within the area of the zones. After finishing up with the zones, the *Channel Setting* property window can be closed using standard Windows close button (right top corner).



Figure 23: Example of motion zone placement covering areas of interest

¹ This feature is supported by Fike Video Analytics IP firmware version 1.842 or higher.

5.2 Observing Events

The events that occur will all appear in the Alarms tab along with the video images from the channels where the events occurred. This gives the remote operator an opportunity to instantly assess the situation and determine the appropriate response. Along with the video image, the events will appear in the alarm log in the *Alarms* tab (Figure 24). When detecting events in the default mode, Fike Video Analytics software can be set to automatically maximize the *Alarms* tab window if minimized or bring the *Alarms* tab forward if another screen is open. This allows the guard to immediately start assessing the situation. By default, the alarm view functionality is enabled; however, the user must open the *Alarm* tab at least once during system setup process in order to activate this feature.

Each time Fike Video Analytics software registers an event, a line item will be added to the alarm list describing the type of event, age (time since the beginning), local time when event started (Start time), time when event ended (Stop time), duration of the event, server ID (Host), channel number and comment (Figure 24).


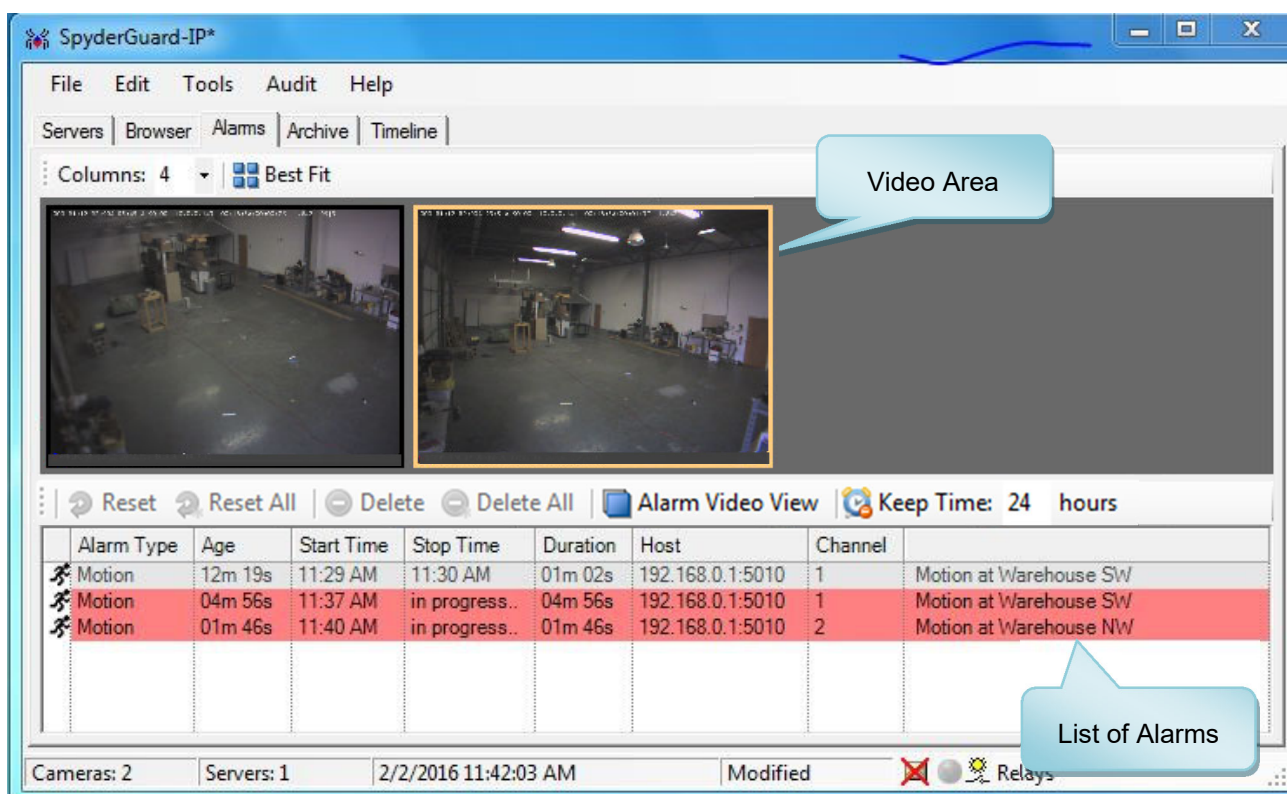



Alarm Type	Age	Start Time	Stop Time	Duration	Host	Channel	
 Flame	28s	10:45 AM	in progress..	28s	fsmx001:5010	1	Flame at Camera #1

Figure 24: Alarm List

Real-time video images of all channels from the alarm list will populate the video area of the alarms view (Figure 25). While the conditions continue that caused the alarm, the alarm is in an active state indicated by the *In progress* message in the Stop time column. Once the alarm conditions are no longer present, the alarm becomes inactive. Inactive alarms can be removed from the list by using the *Delete* or *Delete All* buttons. Removing inactive alarms does not remove them from the NVR storage. Older alarms still can be observed in the *Archive* and *Timeline* tabs.



The screenshot shows the SpyderGuard-IP software interface. The 'Alarms' tab is selected. The main area displays two video feeds side-by-side, showing a warehouse interior. Below the video feeds is a toolbar with buttons: Reset, Reset All, Delete, Delete All, Alarm Video View, and Keep Time: 24 hours. Below the toolbar is a table listing alarms.







Alarm Type	Age	Start Time	Stop Time	Duration	Host	Channel	
 Motion	12m 19s	11:29 AM	11:30 AM	01m 02s	192.168.0.1:5010	1	Motion at Warehouse SW
 Motion	04m 56s	11:37 AM	in progress..	04m 56s	192.168.0.1:5010	1	Motion at Warehouse SW
 Motion	01m 46s	11:40 AM	in progress..	01m 46s	192.168.0.1:5010	2	Motion at Warehouse NW

At the bottom of the interface, there is a status bar showing: Cameras: 2, Servers: 1, 2/2/2016 11:42:03 AM, Modified, and a Relays icon.

Figure 25: Observing the Alarms

In the case of nuisance smoke alarms, it may be necessary to reset a Fike Video Analytics IP or ONVIF camera. The software provides two reset options, *Reset* and *Reset All*, which are described in the following table. Resetting the camera will restart the image analysis algorithms used by the camera to detect fire and smoke, which will cause the event to be cleared. It will also reset the relays on the Fike Video Analytics IP camera and any active WISE relays that are configured for this camera.

The tool bar on the top of the list of alarms has a row of action buttons that let you handle the alarms. The tool bar includes the following actions.

	Reset	Resets the analytical context of the selected channel. This action is useful for clearing false smoke alarms. Reset has no effect on an active flame alarm. Also resets any active Fike Video Analytics IP camera relays or Wise relays configured for this camera.
	Reset all	Resets all active events in the list. Same effect as above, but applies to all active events.
	Delete	Deletes the selected event if it has been completed.
	Delete all	Deletes all completed events from the active alarm list.
	Alarm Video View	Switches view to Alarms tab whenever an event is activated.
	Keep time	Use to set the amount of time to keep the events in Alarm view. Note that all events in the database will be visible in Archive and Timeline view.

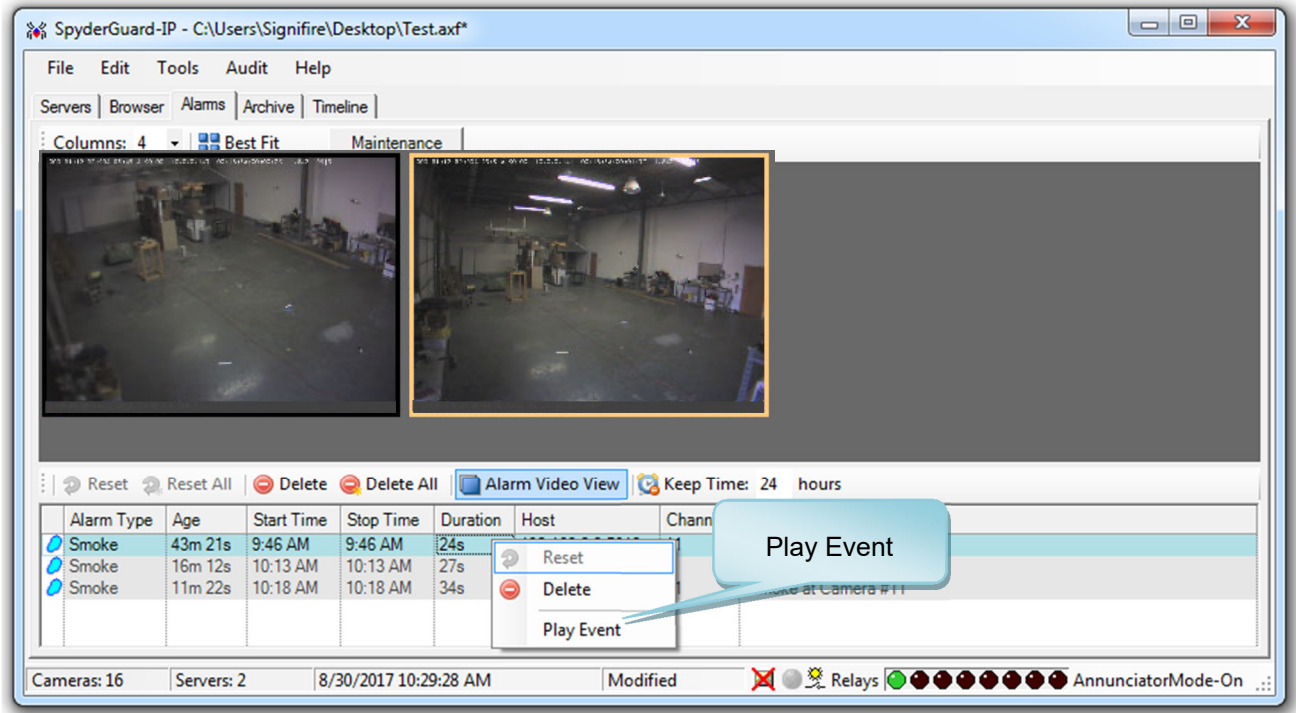


Figure 26: Playing Back Current Events

After the alarm becomes *inactive* the video recordings of the event can be played back. Right-click the event in the alarm list and select *Play Event* (Figure 26). In order to review the events that may no longer be in the list, use either the *Archive* or *Timeline* tabs.

5.3 Reviewing Event in Archive

To review the recorded events, use the *Archive* tab (Figure 27). Here the list of events can be generated according to search criteria that consists of the NVR server, channel selection (all or single channel), type of alarm, time range duration and age of the alarm. Once the filter settings for the search criteria are set up, selecting the *Search* button will produce a list of events that satisfy previously set criteria. Now you may choose a particular alarm of interest and play back the video recording made at the time when it occurred.

The screenshot shows the SpyderGuard-IP software interface. The top menu bar includes File, Edit, Tools, Audit, and Help. Below the menu is a tabbed interface with Servers, Browser, Alarms, Archive, and Timeline. The Archive tab is active, displaying a 'Search Criteria' section. A blue callout bubble labeled 'Filter Settings' points to the search criteria area. The search criteria include:

- Server: All Servers (dropdown)
- Channel: All Channels (dropdown)
- Alarm Type: Checkboxes for Flame, Smoke, Offsite, Motion, User, Fault, and Disconnect.
- Start Time: 08/24/2017 - 02:58 PM (dropdown) with an 'Enable' checkbox.
- Stop Time: 08/25/2017 - 02:58 PM (dropdown) with an 'Enable' checkbox.
- Duration: (hh:mm:ss) with an 'Enable' checkbox.
- Age: (hh:mm:ss) with an 'Enable' checkbox.

 Below the search criteria are buttons for Clear, Search, Download, View, and Export. A table below the search criteria lists the search results. A blue callout bubble labeled 'List of alarms' points to the table. The table has columns: #, Server, Channel, Alarm Type, Duration, Age, Start Time, Stop Time, and Video. The table contains 16 rows of data. At the bottom of the interface, there is a status bar showing 'Cameras: 24', 'Servers: 2', '8/25/2017 3:02:04 PM', and 'No Relays'.

#	Server	Channel	Alarm Type	Duration	Age	Start Time	Stop Time	Video
1	192.168.0.3:5010	2	Smoke	02m 06s	23h 13m 10s	8/24/2017 3:48:16 PM	8/24/2017 3:50:23 PM	yes
2	192.168.0.3:5010	11	Smoke	02m 27s	22h 24m 31s	8/24/2017 4:36:55 PM	8/24/2017 4:39:23 PM	yes
3	192.168.0.3:5010	7	Smoke	24s	18h 10m 30s	8/24/2017 8:50:57 PM	8/24/2017 8:51:21 PM	yes
4	192.168.0.3:5010	14	Disconnected	05m 23s	06h 36m 27s	8/25/2017 8:24:59 AM	8/25/2017 8:30:23 AM	yes
5	192.168.0.3:5010	14	Disconnected	05m 44s	03h 03m 08s	8/25/2017 11:58:19 AM	8/25/2017 12:04:04 PM	yes
6	192.168.0.3:5010	6	Smoke	07m 19s	01h 21m 44s	8/25/2017 1:39:43 PM		
7	192.168.0.3:5010	7	Smoke	08m 30s	01h 21m 43s	8/25/2017 1:39:43 PM		
8	192.168.0.3:5010	3	Smoke	12m 47s	01h 21m 40s	8/25/2017 1:39:46 PM		
9	192.168.0.3:5010	5	Smoke	13m 13s	01h 21m 49s	8/25/2017 1:39:38 PM	8/25/2017 1:52:51 PM	yes
10	192.168.0.3:5010	11	Smoke	58s	39m 16s	8/25/2017 2:22:10 PM	8/25/2017 2:23:09 PM	yes
11	192.168.0.3:5010	7	Motion	46s	02m 11s	8/25/2017 2:59:16 PM	8/25/2017 3:00:02 PM	yes
12	192.168.0.3:5010	7	Smoke	45s	01m 52s	8/25/2017 2:59:35 PM	8/25/2017 3:00:20 PM	yes
13	192.168.0.6:5010	3	Flame	02s	22h 10m 51s	8/24/2017 4:50:35 PM	8/24/2017 4:50:37 PM	yes
14	192.168.0.6:5010	6	Smoke	42s	21h 09m 03s	8/24/2017 5:52:24 PM	8/24/2017 5:53:06 PM	yes
15	192.168.0.6:5010	3	Flame	02s	20h 13m 55s	8/24/2017 6:47:32 PM	8/24/2017 6:47:34 PM	yes
16	192.168.0.6:5010	3	Disconnected	05m 47s	13h 35m 24s	8/25/2017 1:26:03 AM	8/25/2017 1:31:50 AM	yes

Figure 27: Archive View with search results

5.4 Archive Search Parameters

The following quick-search parameters are provided to filter the alarms in the list.

Server	The server to search by. Defaults to all servers.
Channel	The channel to search by. Defaults to all channels.
Alarm Type	The alarm type to search by. Defaults to all alarm types.
Start Time	The start time to filter results by. Defaults to include all alarms started within the last 24 hours. This option can be enabled or disabled (enabled by default).
Stop Time	The stop time to filter results by. This option can be enabled or disabled (disabled by default).
Duration	The duration to filter results by. Duration is the length of time the alarm was active. This option can be enabled or disabled (disabled by default).
Age	The age to filter results by. The age is how old the alarm is. This option can be enabled or disabled (disabled by default).

5.5 Archive Search Results

The resulting table for archive has the following fields.

Server	Displays the IP address or host name and port number of the FSM-IP server where the alarm data is stored.
Channel	Displays the channel number the alarm happened on.
Alarm Type	Displays the type of alarm that occurred.
Duration	Displays how long the alarm lasted.
Age	Displays time passed since beginning of the alarm.
Start Time	Displays the date and time when the alarm started.
Stop Time	Displays the date and time when the alarm stopped.
Video	Indicates if the alarm has an associated video.

5.6 Downloading Video

To download the video file associated with the selected event onto your local machine, click on the *Download* button. The system will prompt you for a location and name of the Fike Video Analytics video file (AXM or WMV), then will download and save the file. Once saved, the software will give you the option to play the video now through a pop-up menu.

5.7 Playing Back Selected Event

Any selected event that has a video can be played back using the built-in video player (See Section 5.9). To use the video player, simply click the *View* button.

5.8 Exporting the List of Alarms

To download a copy of the Alarm List to a comma separated file on your local machine, click on the *Export* button. The system will prompt you for a location and name of the file.

5.9 Video Player

The video player (Figure 28) streams the archived videos from the NVR and displays them on the screen.

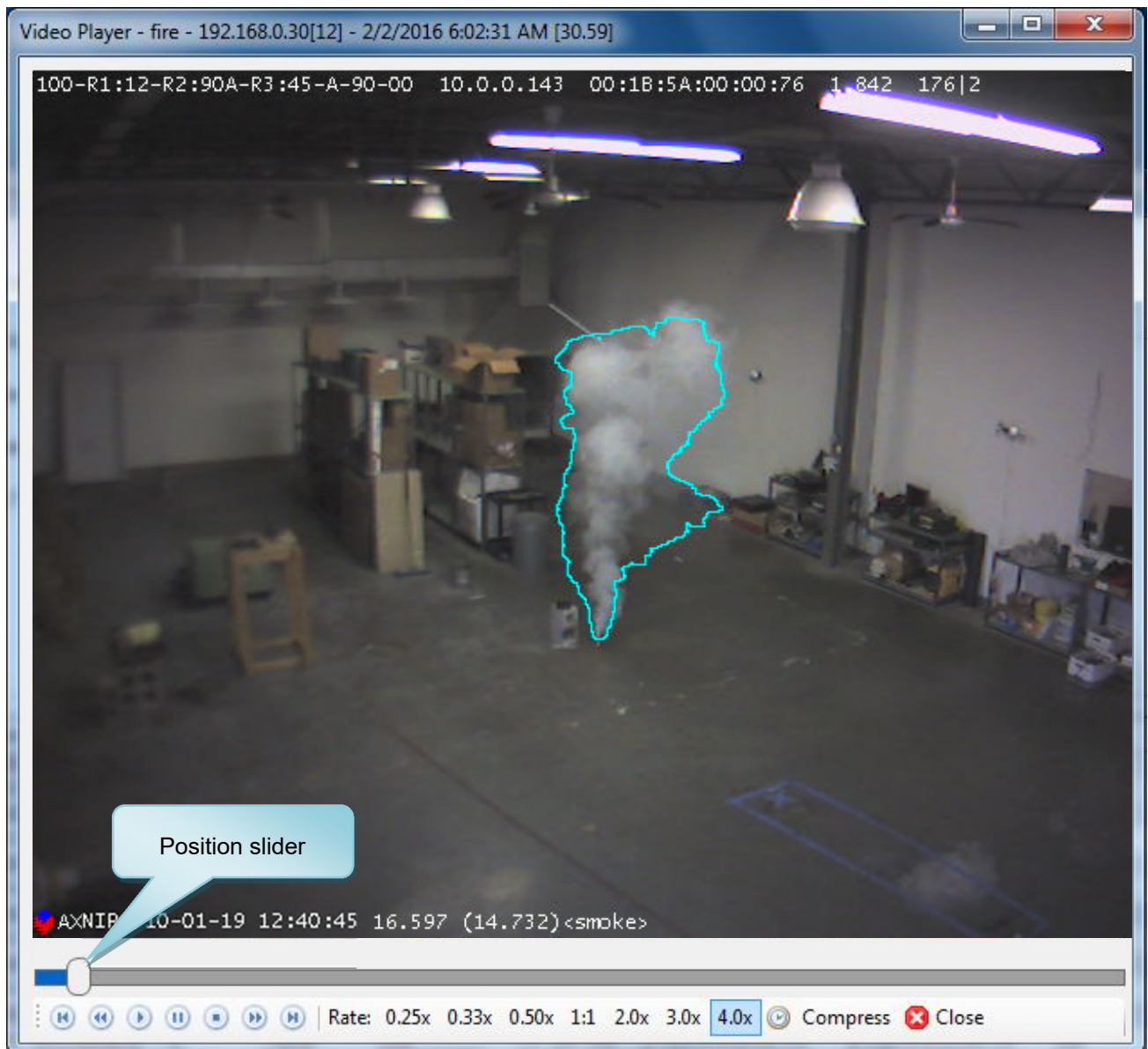


Figure 28: Video Player Window Layout

<< Skip Backward	Skips one frame backward.
< Step Backward	Steps one frame backward.
Play	Plays the video.
Pause	Pauses the video.
Stop	Stops the video; resets playback position to zero.
Step Forward >	Steps one frame forward.
Skip Forward >>	Skips one frame forward.
Rate:	Use to increase or decrease the general playback speed.
Compress	Use to filter out long sections of time from the video where only idle frames were recorded.
Close	Shuts down the video player.

5.10 Reviewing Video Recordings in the Timeline Tab

The Timeline tab allows you to review the events and video recordings stored in the archive in a Gantt chart showing the alarm events in each channel of the selected NVR server. In addition to viewing video recordings of alarms, the timeline allows you to see video recordings from any channel and at any point in time within the capacity of the NVR (Figure 29).

Before Timeline can display the events, the user should select the server from the list of all available online servers in the Server selector. The Fike Video Analytics software will respond by filling up the channel bars indicating events that took place on each particular channel within the selected time window. Each horizontal bar represents a particular channel (1 to 4). The time window default value is 30 minutes but can be altered by selecting an alternative value in the *Window size* selector. The starting time position of the timeline window is controlled by sliding the timeline bar. By default, the timeline display is positioned to cover a range up until the last event.

5.11 Refreshing Timeline Display

The display can be refreshed by clicking the *Reload* button.

5.12 Events Display

Events are displayed as color-coded horizontal bars with the following colors representing the different types of events:

Flame events	Red
Smoke events	Blue
Offsite events (RFL)	Purple
Motion events	Green
User events	Orange
Fault events	Yellow

In addition, tool tips will provide extensive information on each event when the mouse pointer is hovering over the event bar.

5.13 Playing Back Events

To playback or download an event, right click the event and select "play event movie" or "download event movie."

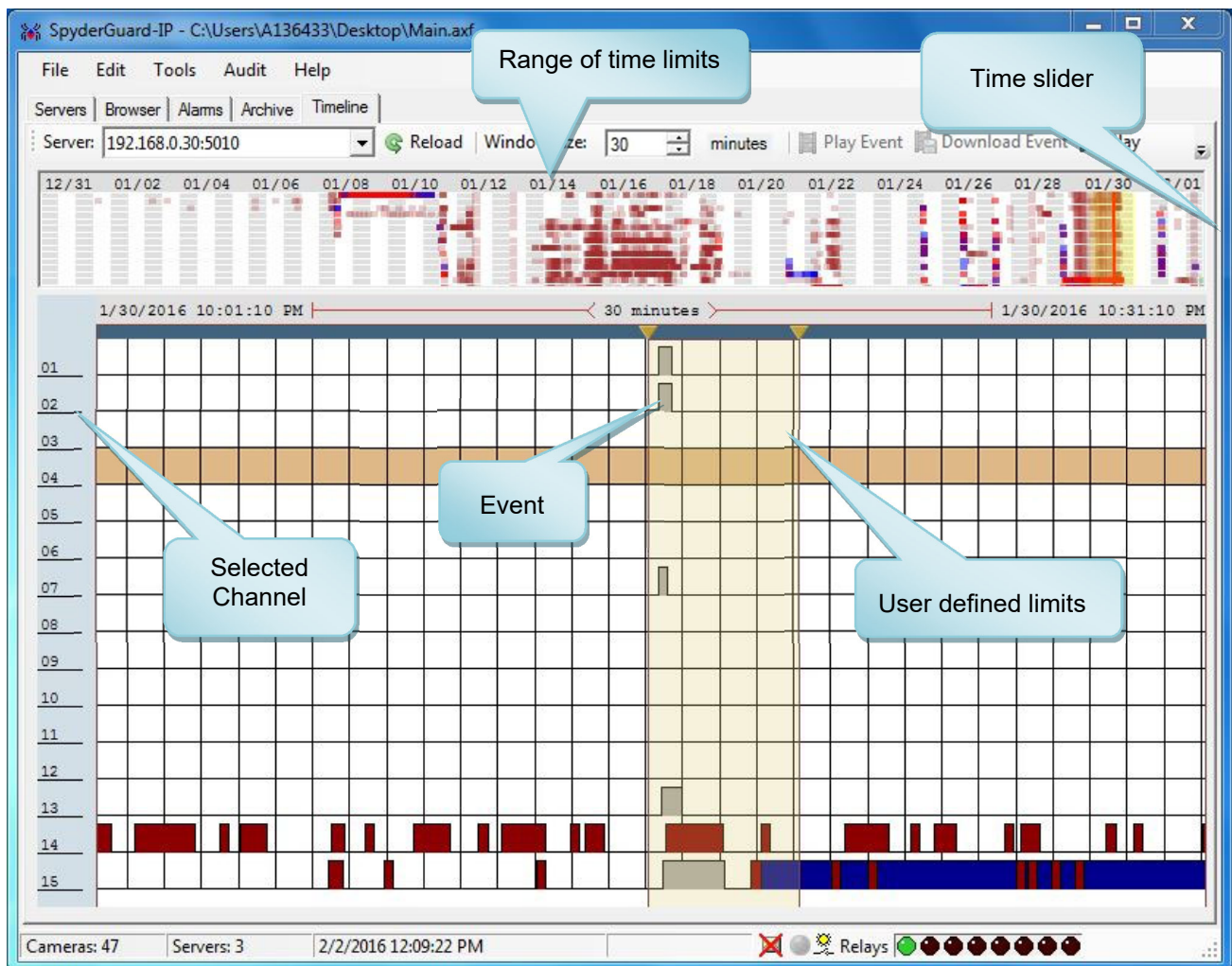


Figure 29: Timeline Chart of activities with user defined time range set.

5.14 Playing Back Arbitrary Time Ranges

Timeline view allows you to set arbitrary time limits and play back the video recorded from any channel. To set up the time limits, drag the inverted rectangles located at the top edge of the timeline diagram as desired, select the channel *View* in the *Selected Time* group. You can then right click the channel within the selected time limits and choose "play timeline" or "download timeline."

6.0 FINE-TUNING THE SYSTEM

After the system is setup and operational, additional adjustments can be made to the program’s operational settings to fine-tune the system to meet site requirements.

6.1 Schedules

Schedules can be created and attached to the zones so they are only active during certain portions of the day. Schedules are usually attached to zoned areas that block reflected sunlight in the morning or afternoon, and each camera has a unique set of schedules and zones. You can easily share schedules between cameras by using the *Schedules* clipboard (Figure 30) to copy and paste the schedules you want to share. To create a new schedule, click *Create Schedule* to open the schedule window.

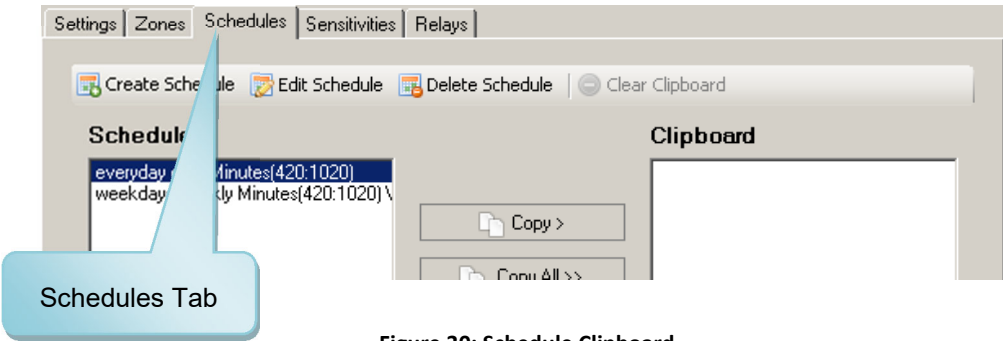


Figure 30: Schedule Clipboard

The Schedule window (Figure 31) allows you to setup the schedule parameters for a selected zone.

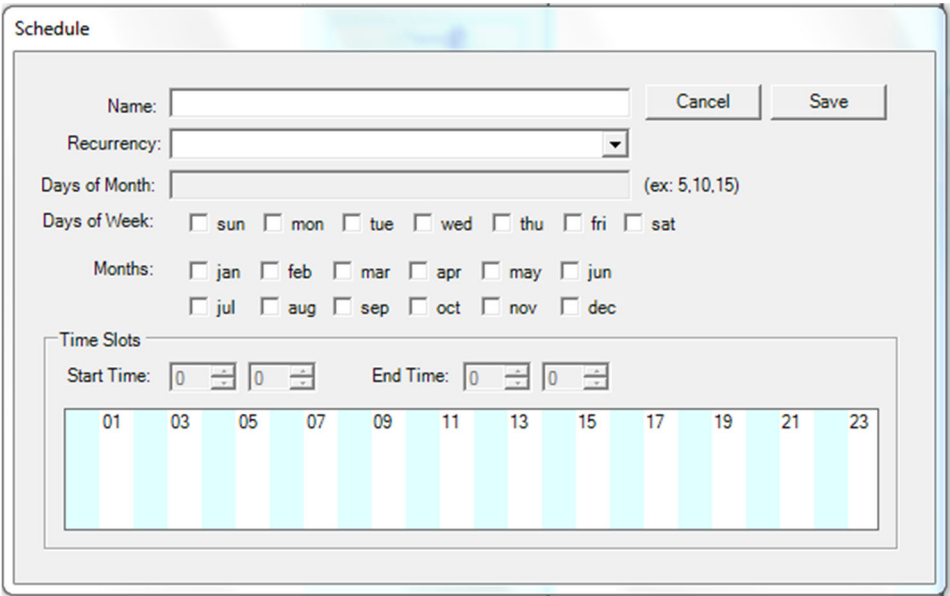


Figure 31: Schedule Setup Window

6.2 Sensitivities

Choosing correct sensitivities is part of the system tuning process (Figure 32). Sensitivities are set up for each category of alarm (fire, smoke, offsite) and allow for only four preset positions (off, low, medium, and high, except for smoke, which has an ultra-high setting). The default medium position will satisfy most conditions, while a higher sensitivity setting will make the system more susceptible to false alarms. Each detection algorithm has a delay setting that prevents the alarm from triggering for a specified time interval (0 – 254 seconds), making it possible to eliminate very short-lived nuisances.

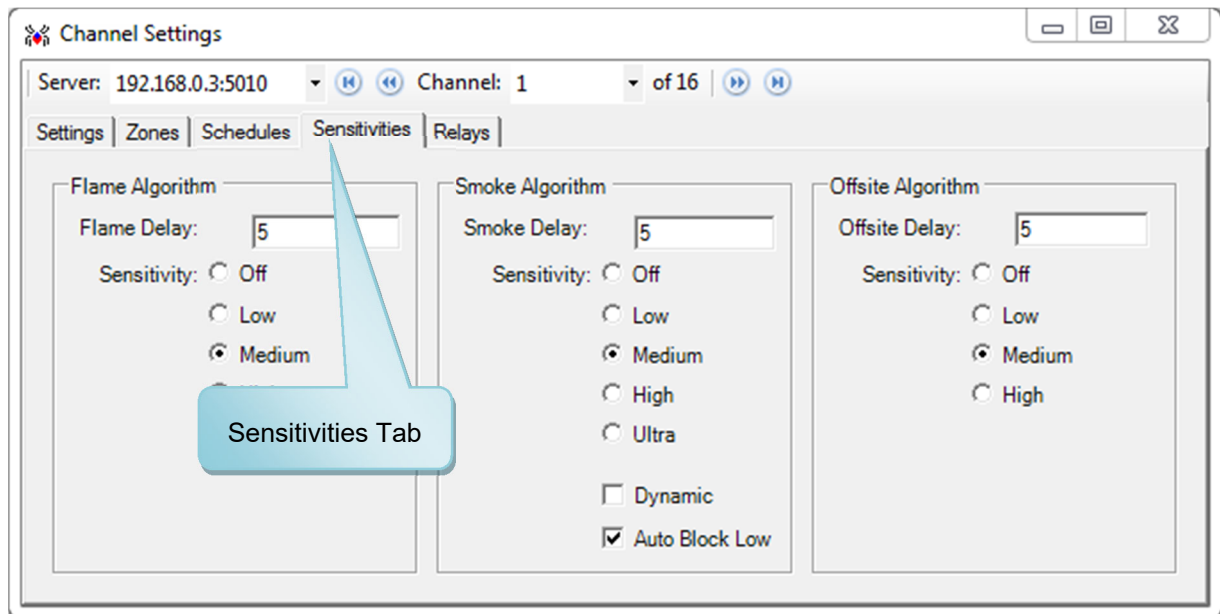


Figure 32: Sensitivity Settings

6.3 Enable Object Recognition Feature

Note: Customer acknowledges and agrees that activation of the Fike Video Analytics software object recognition feature is at the customer's sole discretion. Object recognition is optimal for smoke generated by smoldering fires. A rapid rise of concentrated, high volume smoke may result in delayed recognition of such a hazard by the software when the object recognition feature is in use.

By default, the Object Recognition Algorithm is disabled on all servers. If this feature is required, it must be enabled on each server. To enable Object Recognition, select the Servers Tab on the main screen. From the servers list, select the appropriate server, then right-click and select Properties from the drop down list to open the *Server Properties* dialog box (Figure 33). Select the *Configuration* Tab and click on the *Object Recognition Enabled* box to enable the Object Recognition algorithm operation for the server; then press the *Save* button to exit the form.

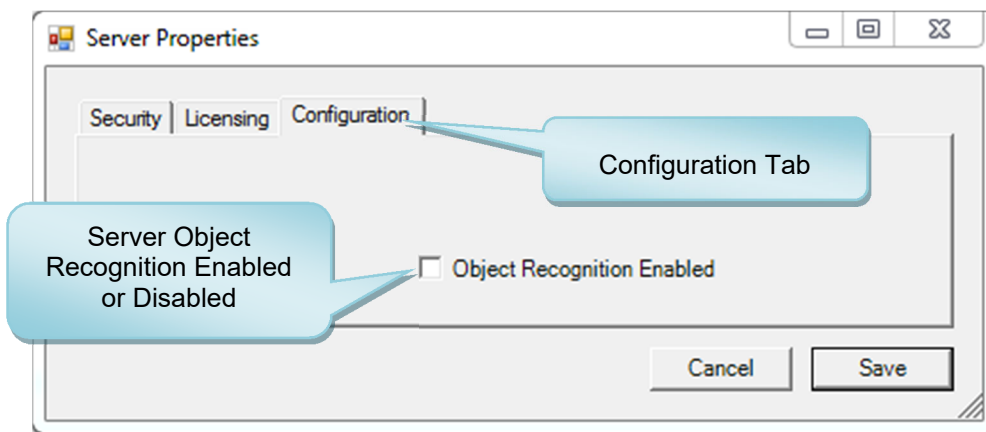


Figure 33: Enabling Server Object Recognition

Once *Save* is pressed on the *Server Properties* dialog box, the following *Enable Object Recognition* dialog box (Figure 34) will be displayed, requiring you to press "Yes" or "No" to confirm that you would like to enable Object Recognition. The dialog box provides a reminder that Object Recognition must also be enabled for each camera (ONVIF only) that is to use this feature.

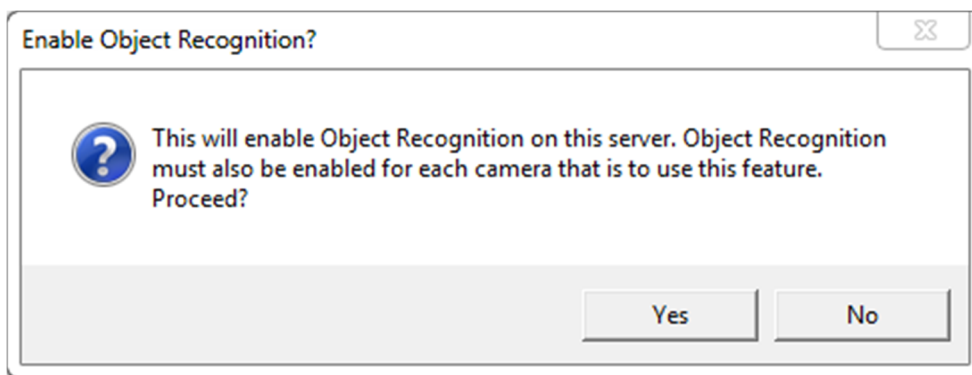



Figure 34: Confirmation of Enabling Server Object Recognition

6.4 Camera Calibration for Object Recognition

Once Object Recognition has been enabled for the server, additional Object Recognition Setup settings will be displayed in the *Channel Settings* dialog box (Figure 35) for each ONVIF camera connected to the server. By default, all ONVIF cameras are NOT selected to utilize Object Recognition; this feature must be enabled in each camera by selecting the *Object Recognition Enabled* box.

Camera calibration must be performed on all ONVIF cameras connected to the Fike Video Analytics system that will utilize object recognition. The software provides two options for camera calibration: (1) A *Calibrate All Cameras* button to initiate the calibration process on all cameras connected to the currently selected server; (2) An *Object Recognition Calibration* check box to initiate calibration of individual cameras.

The Fike Video Analytics software application Organizational Tree will show that the camera calibration process is active by flashing the calibration icon  on all cameras that are being calibrated. Once the calibration process is complete, the normal camera icon will display.

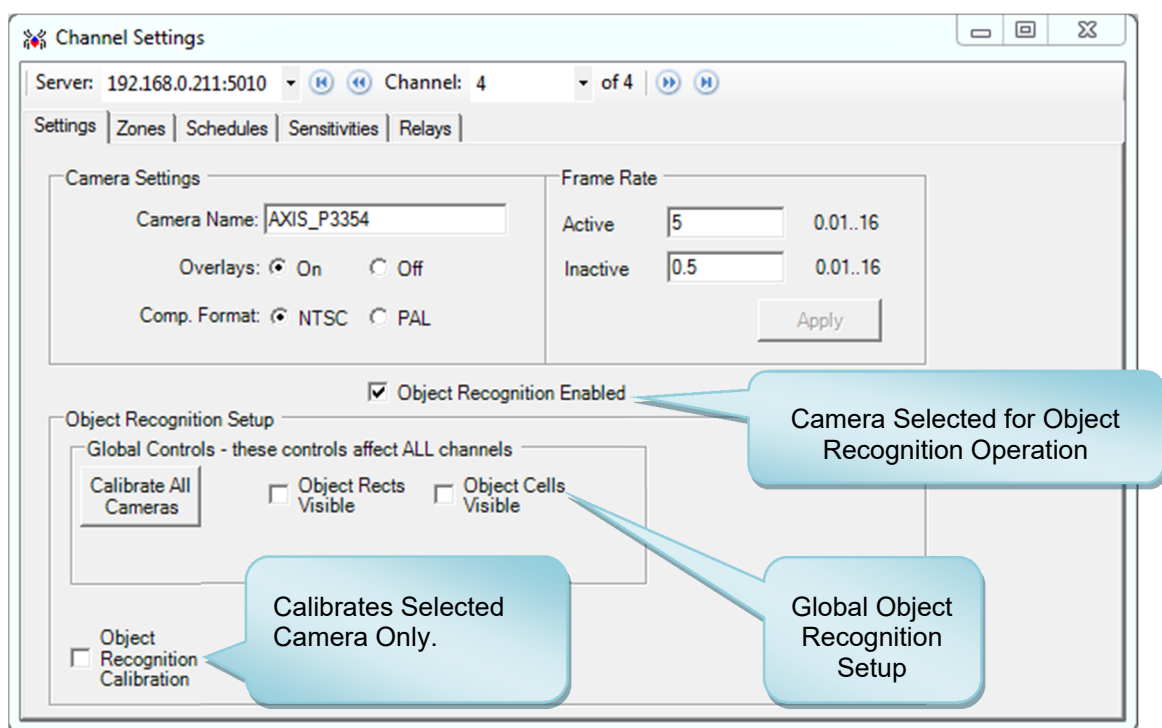


Figure 35: Object Recognition Setup

Note: Manual calibration must be performed on all cameras at installation for the Object Recognition algorithm to operate correctly. In addition, if a camera view changes, a manual calibration should be performed. Manual calibration should be performed with no personnel present in the area served by the camera.

Note: By default, the Fike Video Analytics software regularly performs the camera calibration process on all cameras connected to the server. This process is known as Auto Calibration. Auto calibration takes place with no interaction from the user and is always adjusting the system to the camera view.

The Object Recognition algorithm places yellow calibration boxes and red blocking boxes on the camera image as it runs. These boxes can clutter the camera image, preventing you from getting a clear view of the camera frame. Two check boxes that allow you to select whether these boxes are visible in the camera image (default is off – unchecked) are provided in the *Channel Settings* screen. These are universal settings that will affect all cameras connected to the selected server.

6.5 Relay Control

The Fike Video Analytics IP camera built-in relays are configured via the *Relays* tab in the *Channel Settings* window. If an ONVIF camera is selected, the relay configuration options will not be available. There are three relays on each Fike Video Analytics IP camera, and each can be independently programmed to close on different conditions (Figure 36).

Relays can be set for Automatic or Manual configuration. In Automatic mode, the relay will close and open as event conditions are being detected in real time. In Manual mode, the camera begins a countdown for the specified number of seconds defined in the delay field as soon as the event condition is met. The operator will receive the video and alarm, then have the option to delay, stop, or confirm the event. Confirming the event will cause immediate closure of the relay, whereas delaying it will reset the countdown to the initial position delay period and begin the count down again, providing more time to investigate. The operator can also reset the camera, clearing the alarm if a nuisance event exists.

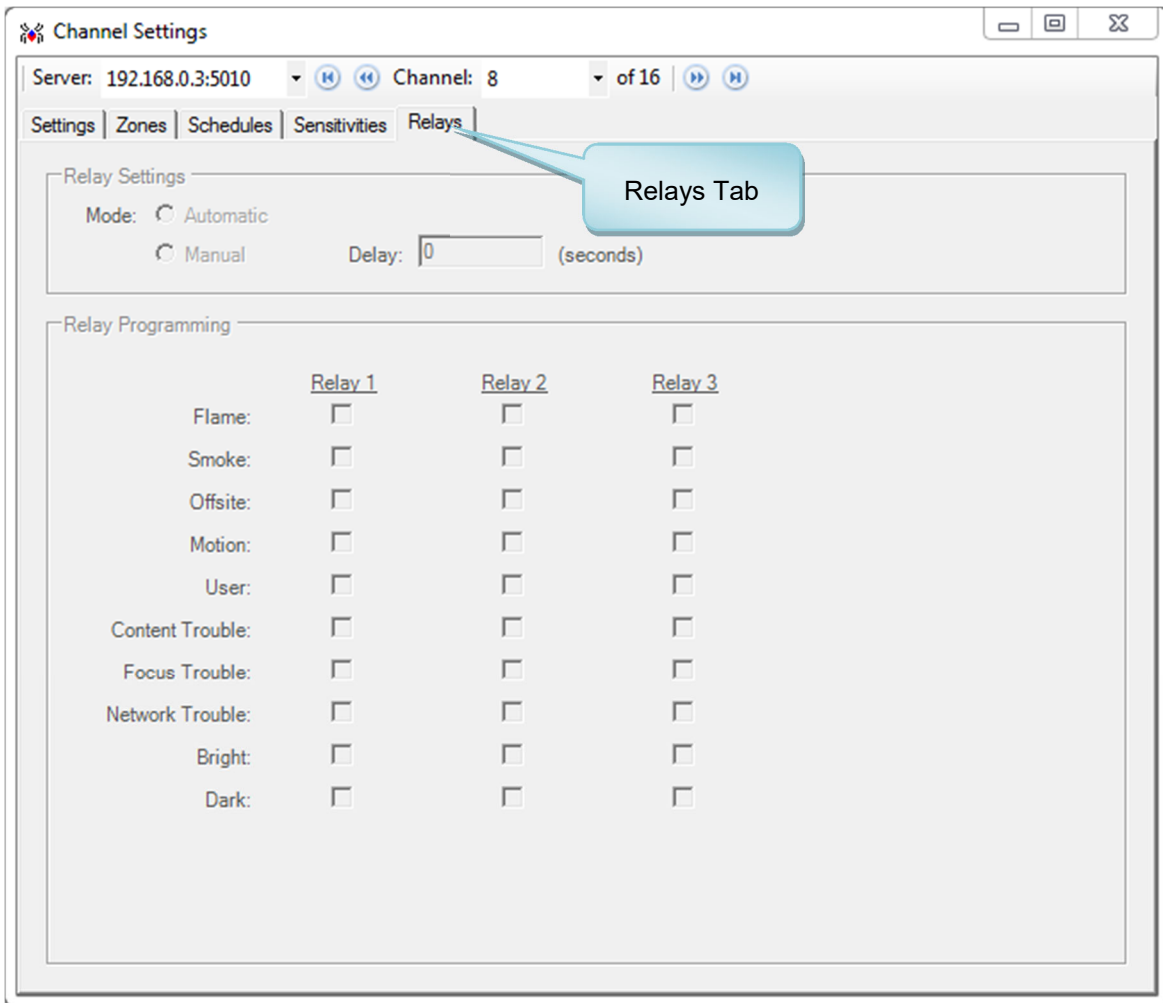


Figure 36: Relay Configuration Panel

Note: Relay 2 is inverted in normal state, meaning it is closed in a non-alarm state so when power fails, the relay will open signaling an alarm state. Relays 1 and 3 are normally open in non-alarm state.

6.6 Audit

After the system is fine-tuned, it is helpful to generate a printed document that contains a detailed report of the system settings for future reference. This is useful for documenting and checking the system configuration at the time of commissioning and at subsequent maintenance intervals to ensure the system has not been compromised. To open the system audit select **Audit>Generate** from the menu (Figure 37).

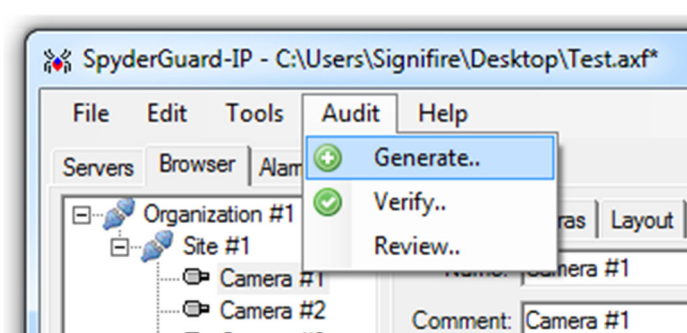


Figure 37: Audit Generation

The audit report document consists of a multi-page summary (Figures 38 and 39) describing the system configuration: list of servers (NVR) and its firmware versions as well as a list of all Fike Video Analytics IP cameras including their IP addresses, serial numbers and firmware version. For each channel the audit report shows the video image, settings, zones and schedules. The audit can then be printed or saved as an Adobe PDF.

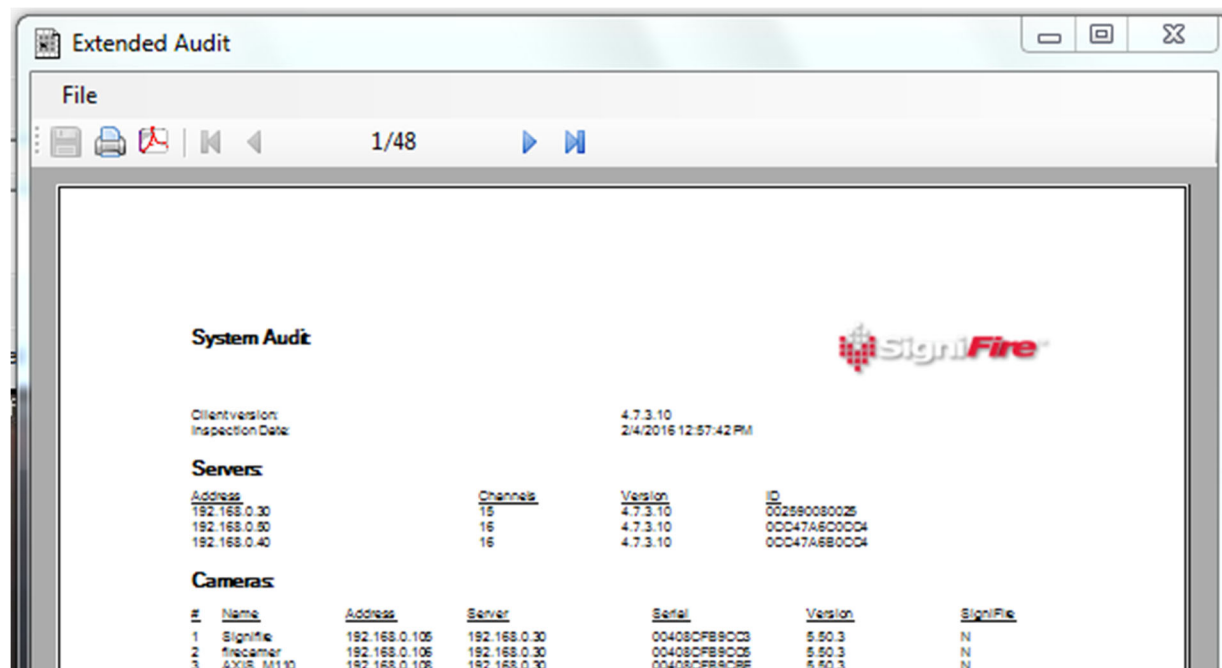


Figure 38: Audit Report

Channel: 1

Date: 2/8/2016



Address	192.168.0.104	Serial	00408CFB9CC6
Version:	5.50.3	Name:	AXIS_M1103

Detectors	Sensitivity	Delay	Dynamic
fire:	off	5	Off
smoke:	off	5	
offsite:	off	5	

Relay mode:	flame	smoke	offsite	motion	user	content	focus	network	bright	dark
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Zone	Type	Mode	Schedules	Points
Inspector name _____ Signature _____				

Figure 39: Channel Settings for Audit Report

7.0 PREPARING FOR ENTERPRISE USE

Now that the Server and the Video Analytics software are both configured and operational, the system can be set up for everyday use. That includes securing the access to prevent unauthorized users from changing the configuration settings of the Fike Video Analytics system, possible use of e-mail notifications and optional relay module.

7.1 Securing Access

The factory default setting has security turned off. When security is off, any client assumes the admin level of access allowing them to change the server settings and configurations. When secure access is on, at the connection time the Fike Video Analytics software will prompt you for choosing the access level (guard, admin) and entering the password. With security on, certain guard level clients will only be able to view video channels, recordings and observe alarms. To turn the security on/off, select *Server* view, select the server and click the *Properties* button. From the *Server Properties* dialog box (Figure 40), enter the passwords for each *Guard* and *Administrative* account and press the *Save* button to exit the form. Next time any client attempts to connect to the server, the log-in dialog will prompt them for their Account and Password.

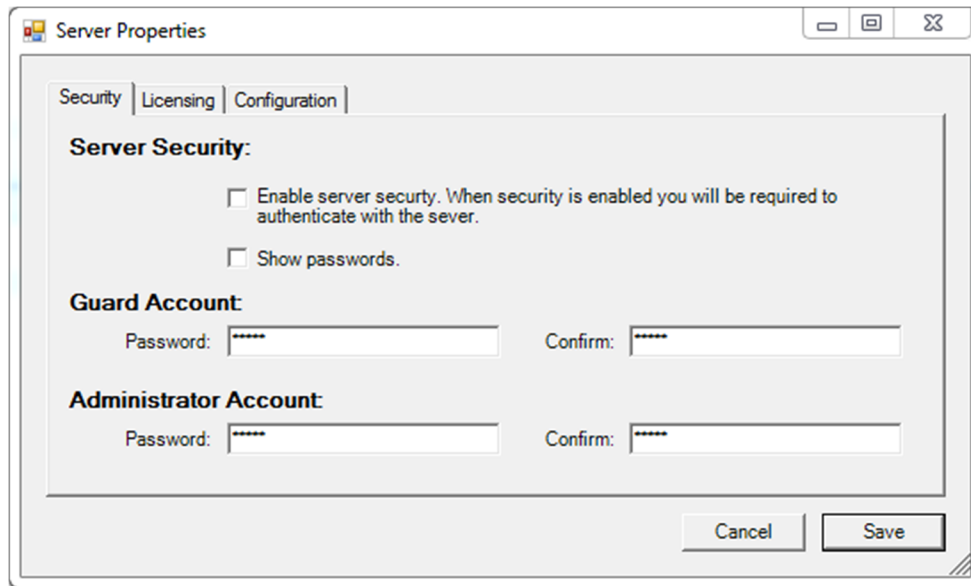


Figure 40: Setting Security for the Server

7.2 Accessing the Server

Once a server is added to the Video Analytics software, the client can switch the access level of the server from “Guard” to “Admin” and vice versa. To switch the user access level, select the server from the server list (Figure 41); then click the “Add Server” button to open the “Server Editor” form (Figure 42).

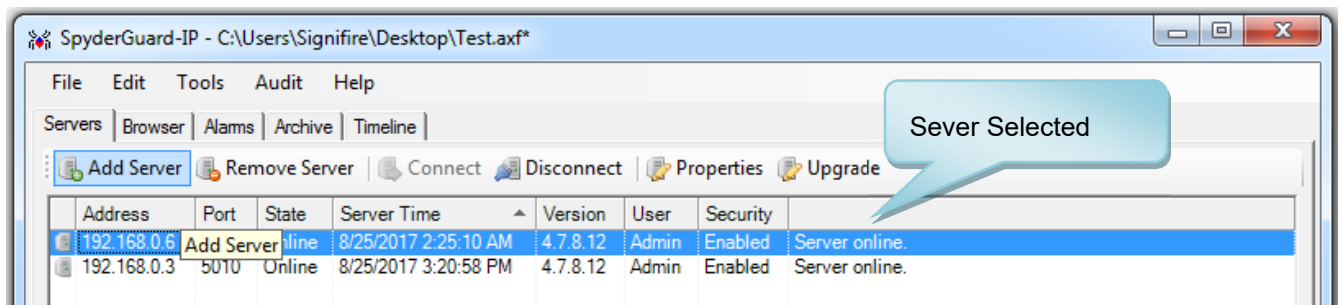


Figure 41: Changing Security for an Individual Server

From the *Server Editor* form (Figure 42), type in the IP address of the selected server; then select the desired access level for the selected server “Guard” or “Admin”. Enter the User password and press the Save button to set the server access level. Repeat this process for each server if access level needs to be changed.

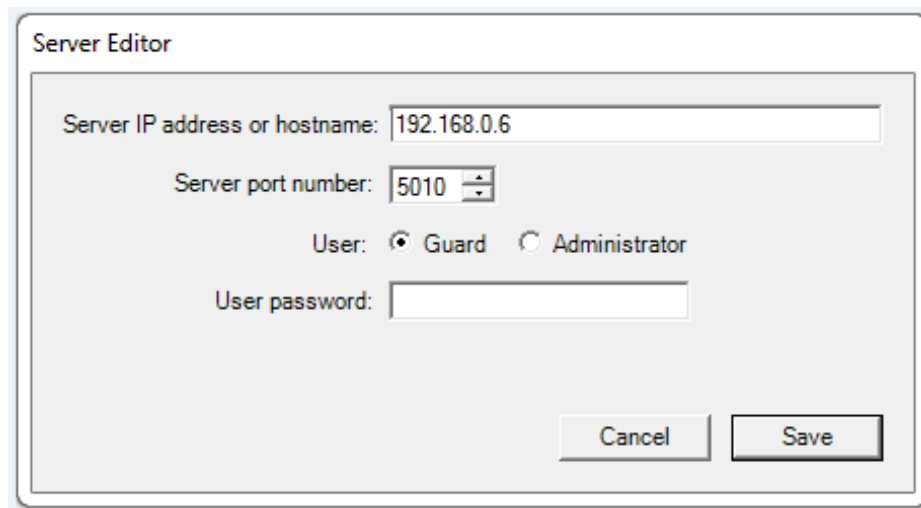
The image shows a 'Server Editor' dialog box. It contains the following fields and controls: 'Server IP address or hostname' with the value '192.168.0.6'; 'Server port number' with a spinner box set to '5010'; 'User' with two radio buttons, 'Guard' (selected) and 'Administrator'; 'User password' with an empty text field; and 'Cancel' and 'Save' buttons at the bottom right.

Figure 42: Changing Server Access Level

To prevent accidental or unwanted changes to the system configuration, it is strongly recommended that the access level for all servers be set to “Guard” before placing the system into normal operation.

7.3 E-Mail Notifications

The Video Analytics software can be configured to send e-mail notifications on the alarms. To configure the Agent, use the *Tools/E-Mail agent* command on the main menu (Figure 43).

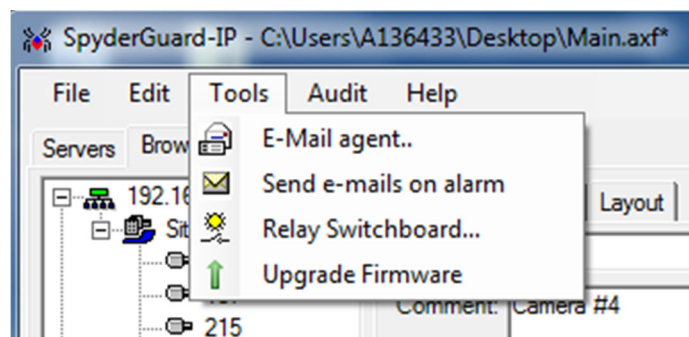



Figure 43: Accessing E-Mail Agent

In response, the software starts the E-Mail Agent configuration form (Figure 44). Fill out the fields in the form:

Figure 44: E-Mail Agent Configuration

Mail to be sent to	Enter the valid e-mails you would like Fike Video Analytics software to send notifications. Multiple e-mails can be entered separated by a semicolon ';' In our example we use johndoe@acindustries.com as the intended recipient of an e-mail.
Mail originated from	This will show the source of the e-mail or as mail coming "From". You may use some meaningful name such as agent@acindustries.com
Subject	Defines prefix phrase for the subject that will be followed by the description of an alarm such as "Fire Alert".
Mail Server	Specifies a valid SMTP server that is authorized to relay e-mails from the account of the Fike Video Analytics software user. (Verify with an IT Administrator)
Mail Server Port	Enter the dedicated port (default 25)
Select only these events	Specify the events that you would like to be notified via e-mail
Send e-mails on alarm	Turns the E-Mail Agent function ON or OFF (checked or unchecked). The e-mail status icon  in the main window status bar will indicate the active state of the e-mail function. If the status icon appears with a red cross, the e-mail agent is turned off. The e-mails will not be sent until the agent is turned on. The E-Mail Agent function can also be turned ON or OFF using the <i>Tools/Send e-mails on alarm</i> command on the main menu (Figure 41).
Test	Test the validity of entries by sending a test message. If recipients do not exist or specified Mail Server is unavailable or not authorized for relay, Fike Video Analytics software will respond with an error message.
Use Authentication	Enables use of authentication with the SMTP server.

After you have configured the agent and received the test message you may close the E-mail Agent configuration form. When turning the E-Mail Agent ON or OFF, the *Fike Video Analytics* software will send a message. When an alarm occurs the agent will send the message with a snapshot of the video captured from the channel that caused the alarm (Figure 45).

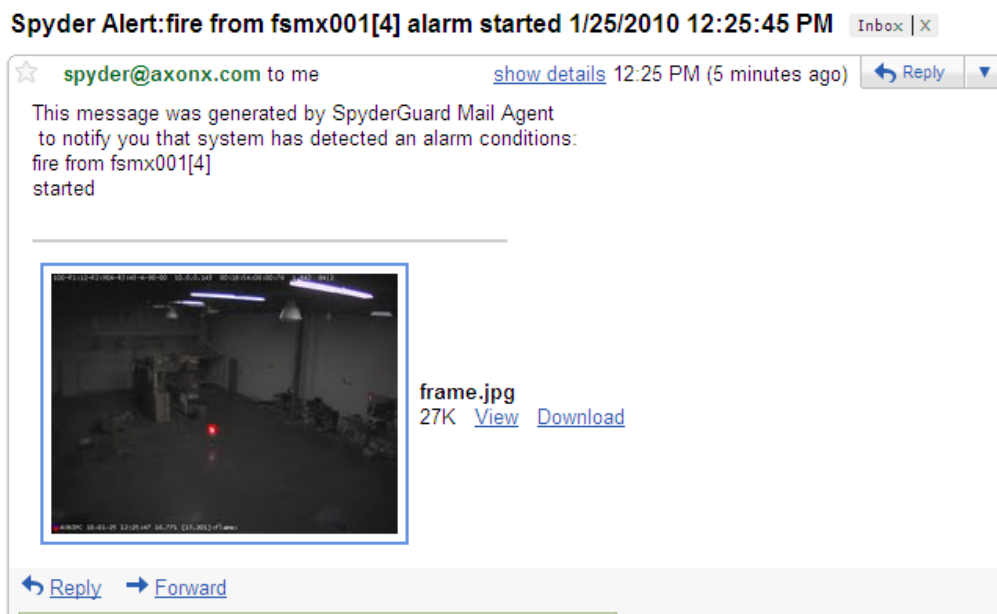


Figure 45: Alarm Notification Messages (gmail client)

Similarly when alarm conditions recede, another message will be sent (Figure 46).

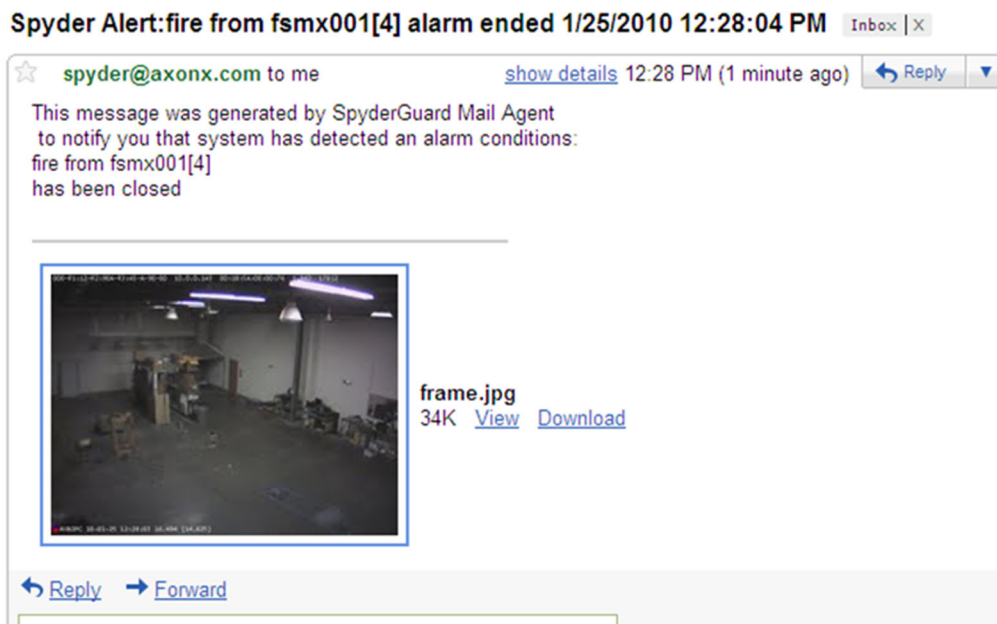


Figure 46: Alarm Ended Notification Messages (gmail client)

7.4 External Relays

The Video Analytics software (Fike Video Analytics software) allows a single external relay (WISE 7167) to be connected to the system. The module provides eight, dry relay contacts, seven of which can be independently programmed. Refer to Fike document P/N 06-779. To add the WISE relay module to the Fike Video Analytics software system, double-click on the “No Relays” icon on the status bar located at the bottom of the main program window (Figure 47).

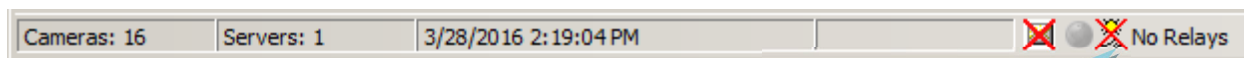


Figure 47: Main Window Status Bar

The *Select Relay Module* dialog box (Figure 47) will open. Select the relay module type (Wise_7167) and enter the designated IP address assigned to the module. Click Verify to check communication with the relay module. “Searching for device...” will be displayed until communication with the device is established.

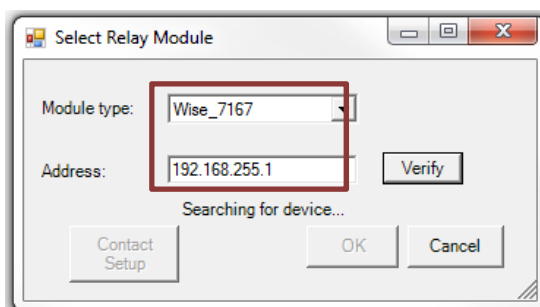


Figure 48: Adding an External Relay

Once the relay module is connected and communication is established, the relay status indicator on the Main Window status bar (Figure 49) will change to indicate the connected status of the external relay module and the state of the module's eight relays. The relay status indicator will change from indicating “No Relays” to indicating “Relays” and a green indicator will illuminate to show the connected status of the relay module. The remaining indicators will illuminate (red) upon activation of each individual relay.



Figure 49: Relay Status Bar

Once communication is established, click Contact Setup (Figure 50) to configure the relays for normally open or closed operation.

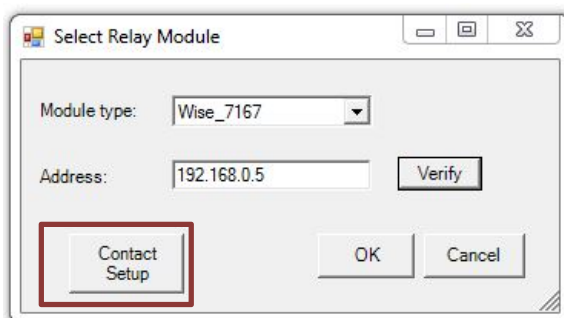


Figure 50: External Relay Contact Setup

The *Relay Contact Type* form (Figure 51) will be displayed. From this screen, each of the seven relays available on the module can be configured for normally open (NO) or normally closed (NC) operation. By default, all relays will be set to normally open.

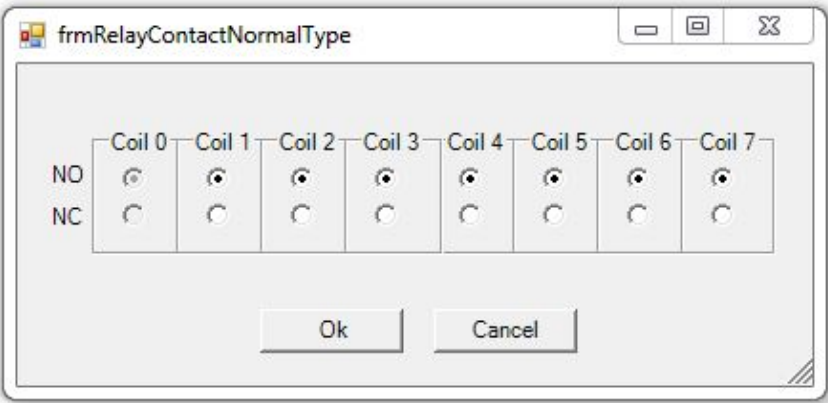


Figure 51: Relay Contact Type

NOTE: Should power to the Wise relay module be lost, all relay contacts will default to the normally open state.

Click “OK” to exit the contact setup screen.

7.5 Relay Configuration

Once the relay has been successfully added to the Fike Video Analytics system, The *Relay Switchboard* dialog box must be used to configure the external relay module. Select *Tools/Relay Switchboard* from the main menu (Figure 52) to access the Relay Switchboard.

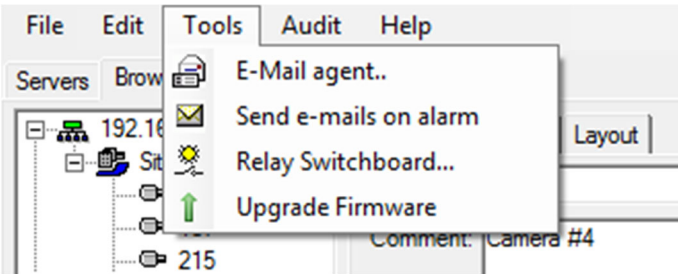



Figure 52: Accessing Relay Switchboard

Within the Relay Switchboard window (Figure 53) you will find two tabs. The features within each tab will allow you to generate new rules, arrange the order of the rules, edit rules, delete rules, and test relay functionality. Initially the rules list will be empty. In order to populate the list, right-click within the list box and select *New rule* or click the *New Rule*  button. In response the Video Analytics software will open the *Relay Rule Wizard* (Figure 54).

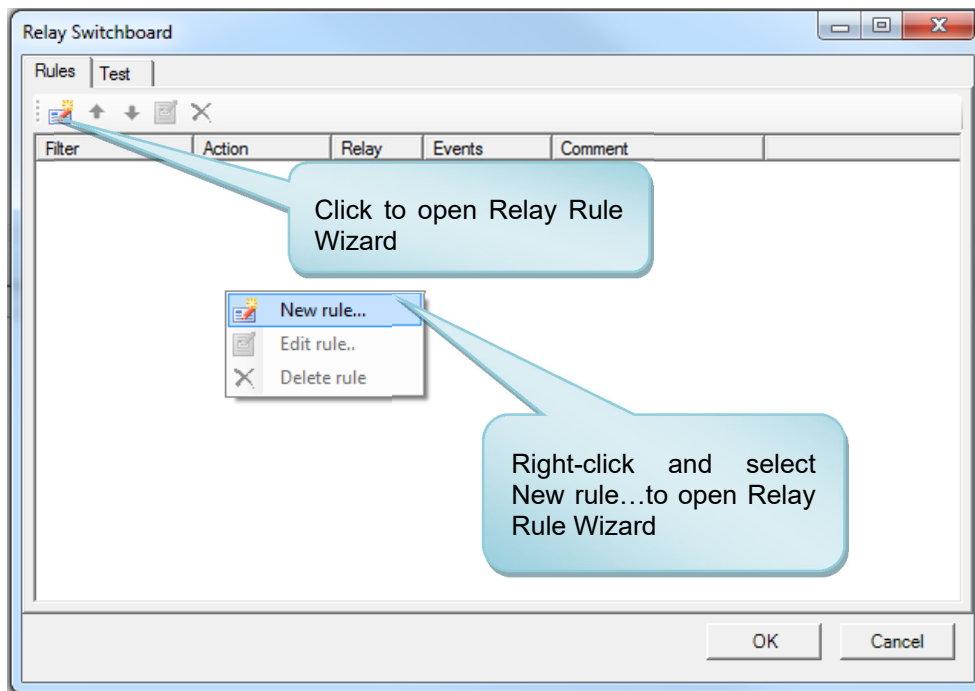






Figure 53: Relay Switchboard Form

	Adds a new rule to the rules list.
	Allows you to navigate up the rules list.
	Allows you to navigate down the rules list.
	Allows you to edit the currently selected rule.

Each rule defines the action for a single relay. The Wise-7167 relay module has a total of 8 relays with one reserved for status leaving 7 relays (1-7) for user defined rules. Use the asterisk to define all the channels or select channels individually. Select the events for which you want the relay to engage using the *Filter* check boxes. When Action is set to *Include*, the relay will be engaged when any of the Filtered alarm types takes place. When in *Exclude* mode the relay state will override any other engaging rule.

The image shows a 'Relay Rule Wizard' window. It has four main sections: 'Source', 'Filter', 'Action', and 'Comment'. The 'Source' section contains a text box with the URL 'http://192.168.0.105/onv'. The 'Filter' section contains a list of event types: 'fire', 'smoke', 'offsite', and 'motion'. The first three are checked, and 'motion' is unchecked. The 'Action' section has two radio buttons: 'Include' (selected) and 'Exclude'. To the right of the radio buttons is a 'Relay' dropdown menu currently showing '1'. Below the radio buttons is a 'Comment' text box. At the bottom right are 'OK' and 'Cancel' buttons.

Figure 54: Relay Rule Wizard Form

Source	Sets the IP address of the camera that will trigger the selected relay to activate. Use the asterisk to define all the channels or select channels individually.
Filter	Sets the event type(s) that will trigger the selected relay.
Action	Sets which relays will activate in response to the event. Include=Relay will be engaged when any of the filtered alarm types takes place. Exclude=Relay state will override any other engaging rule.
Comment	Enter a description of the function of the relay or any other comment associated with the relay operation.

Here in our example, we created three rules (Figure 55). The first rule applies to all channels (designated by the asterisk symbol next to the cameras) and will close relay 1 when either a fire, smoke or offsite event(s) is triggered. The second rule also applies to all channels and will close relay 2 when a fault condition occurs. The third rule activates relay 3 when motion is detected on the channel with IP address 10.0.0.142.

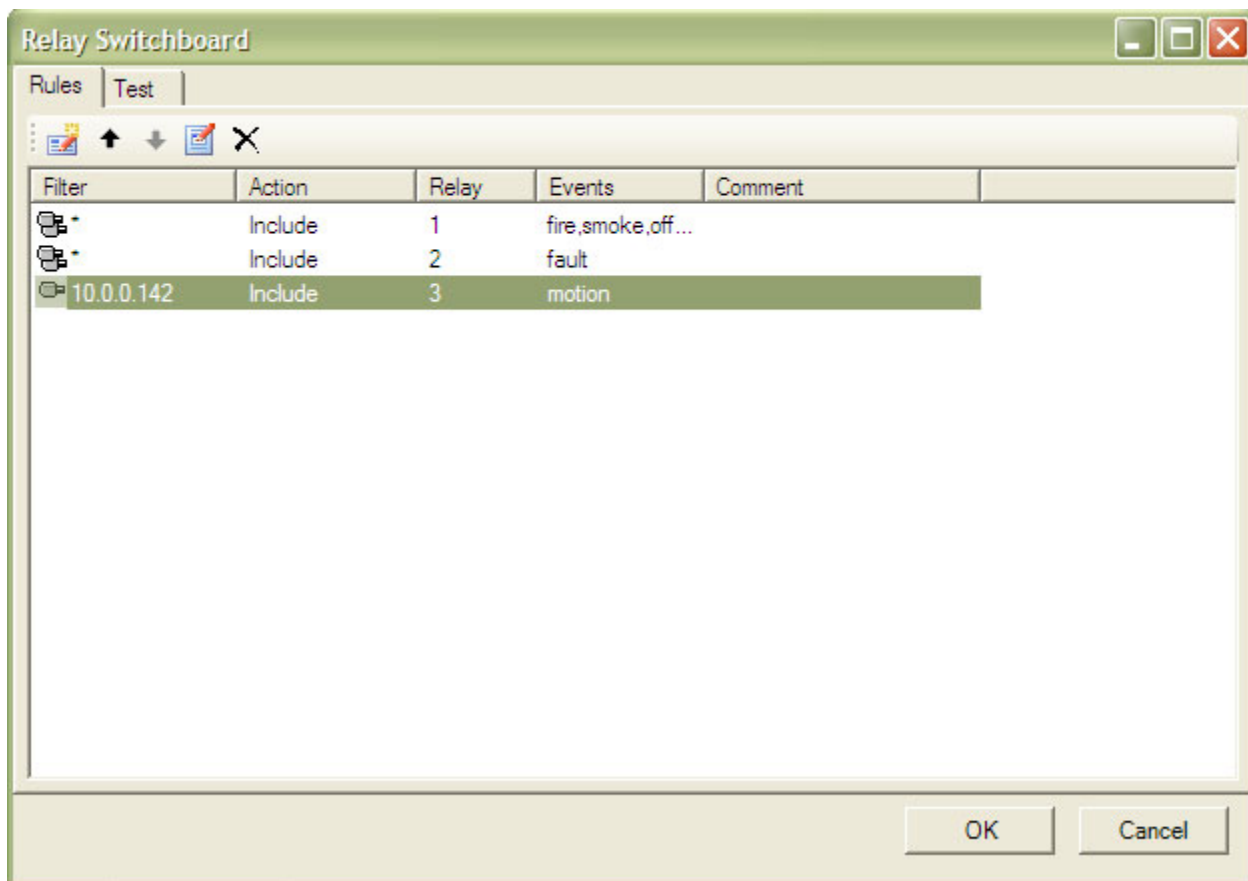


Figure 55: Relay Switchboard Showing Rules for Relay Activation

You may test the relay engagement by using the *Test* pane (Figure 56) where each relay can be engaged/disengaged manually using the proper checkbox.

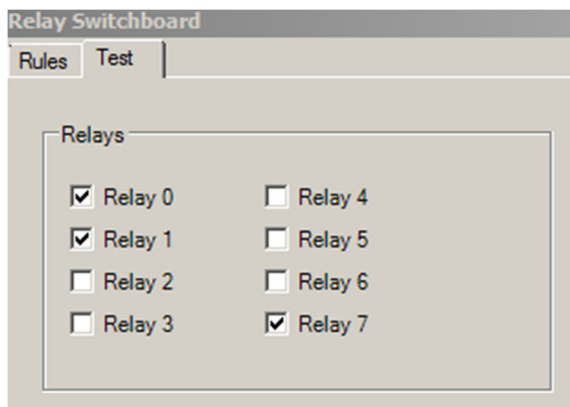


Figure 56: Relay Switchboard Test Tab

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Revision History

Revision	Date	Revision Description
0	06/09	Initial Release
1	07/10	Added new features in the software
2	01/15	Company name change from AxonX to Fike Video Analytics Corporation.
3	10/16	Revised manual to reflect software changes (Version 4.7.7.0)
4	10/17	Revised to reflect software changes (Version 5.0.0.0) and removal of all references to Fike Video Analytics and SpyderGuard.
5	11/17	Revised to add ONVIF camera resolution and frame rate settings to enhance system performance.
6	2/18	Revised to add steps to enable Object Recognition feature.
7	9/18	Revised to reflect the release of software V5.0.1.0. Added not to page 10 concerning cameral stream compatibility.
8	3/19	Update e-mail agent information per latest release of SpyderGuard.
9	6/19	Update to remove any reference to software versions. Also other formatting edits.



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