

USER MANUAL

FOR

FUTRIEVAL REVIEW STATION

Revision 00

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1. Introduction

Thank you for choosing the **Review Station** - Remote Client software application as your remote video monitoring solution. **Review Station (RS)** is a state-of-the-art remote monitoring software application that supports **Futrieval™** IP based Video Management Systems (VMS) Figure 1 below.

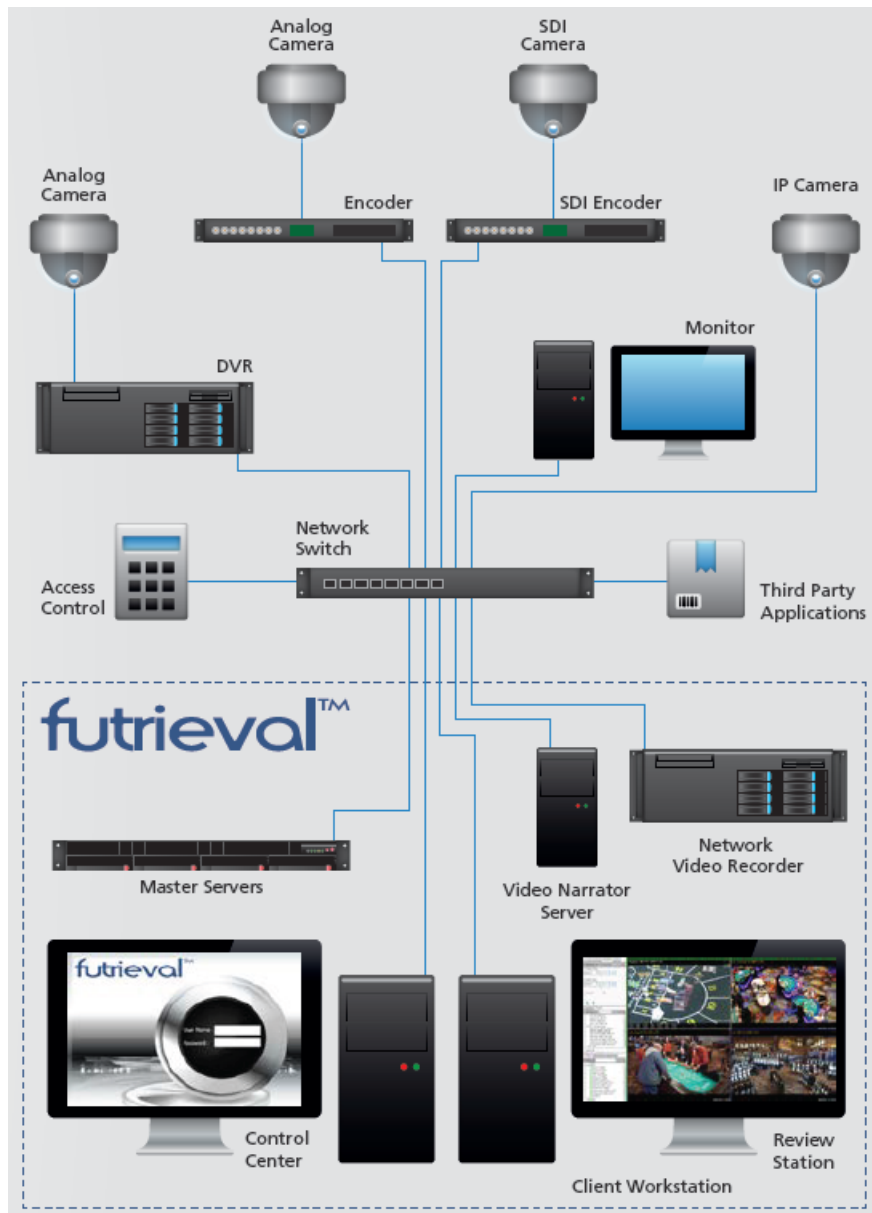


Figure 1: System Overview

1.1. Purpose

The purpose of this User's Guide is to outline the installation, setup and operation of **Futrieval™ Review Station (RS)**.

1.2. Minimum Hardware Requirements

The table below lists the minimum system requirement:

Component	Minimum Requirement
CPU	Intel i7, 3.6GHz
RAM	8GB
Hard Disk	500GB
Recommended Display Card	Intel on-board HD46000 graphics (total 2 outputs) or ATI RAEDON GV-R725XOC-2GI or GV-R927OC-2GD display card
Others	1Gb Ethernet card
Operating System	Windows XP SP3, Windows 7 Professional 64bit, Windows 8, Windows 8.1

Table 1: Minimum System Requirements

1.3. Features

Review Station (RS) incorporates the following primary features:

- One-click access to live and playback video through a Local Area Network (LAN) or an Internet connection
- Camera selection from the tree list
- Unlimited levels of camera groupings supported
- Support multi-monitors
- Fully configurable user interface
- Ability to simultaneously display to 100 streams of live and playback videos per monitor
- Playback of live and/or captured video in fifteen (15) different widows display layouts: 1x1, 2x2, 3x3, 4x4, 5x5, 6x6, 6x10, 10x10, 2+4, 1+5, 1+12, 1+7 and 1/7 and Map in the middle surrounded by 12 videos
- Custom made display layout
- Synchronized playback
- Display live and/or playback video in single or multiple full-screen mode, maximizing the size of the video display window(s)
- On-screen Pan/Tilt/Zoom control
- Adjustment of speed and position of video with scroll bars
- Quick playback access of 1min, 3min, 5min, 10min, 15min, and 30min
- Display overall surveillance system map browsing through desired camera icons
- Unlimited layer levels of maps supported
- Snapshot & digital zoom functions for live or playback
- Bookmark of live or playback incidents
- Flexible and programmable Workspace
- Advanced sequence functions (Salvo switching & Multi-monitors sequencing)
- Video export/download of recording footages
- Audio on Live/Playback
- Compatible with Windows 7 and Windows 8

2. Installation

2.1. Installing Review Station Software

- (a) From the **Futrieval™ CMS Full Package Setup** disc, run Setup.exe and follow the steps below to install **Futrieval™ Review Station ("RS")**:
 - i. Click "Next":



Figure 2: Step 1: Installing Review Station

- ii. Click "I Agree":

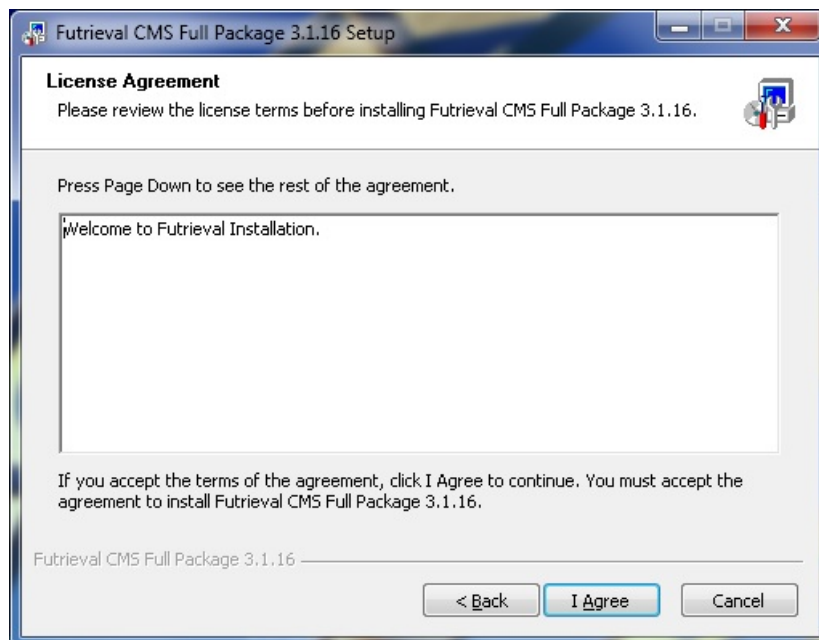


Figure 3: Step 2: Installing Review Station

- iii. Type in the "Destination Folder" or use "Browse" to select the destination folder from Windows directory and then click "Next":

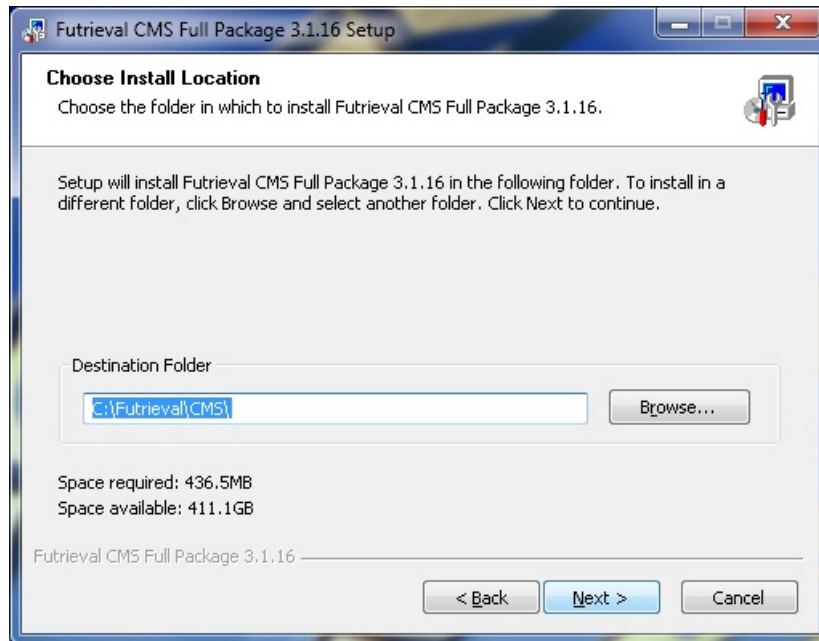
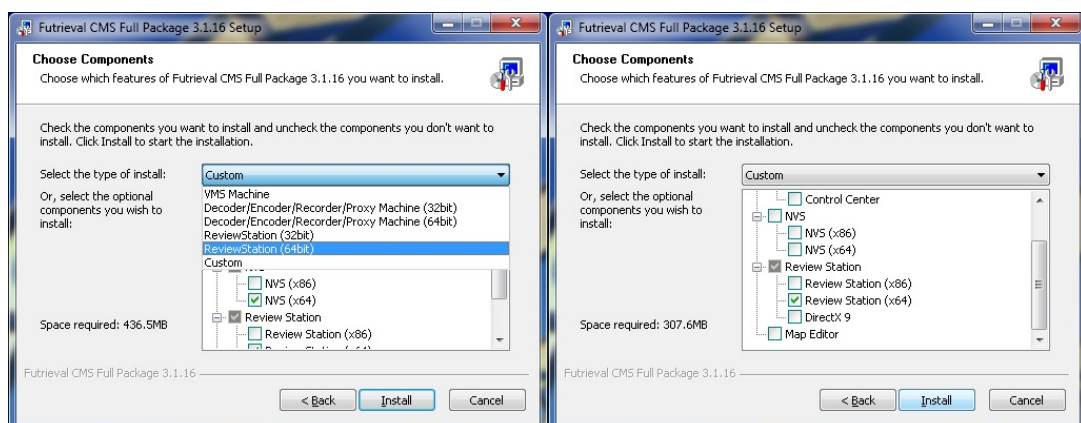


Figure 4: Step 3: Select Destination Folder

- iv. User may select “Review Station (32 bit) / Review Station (64 bit)” from the combo box or select and unselect the individual software module(s) from the check box:



NOTE: “DirectX 9” only requires to be installed if the Operating System is in Win XP.

Figure 5: Step 4: Select the Installation Component(s)

- v. Review Station will then be installed automatically:

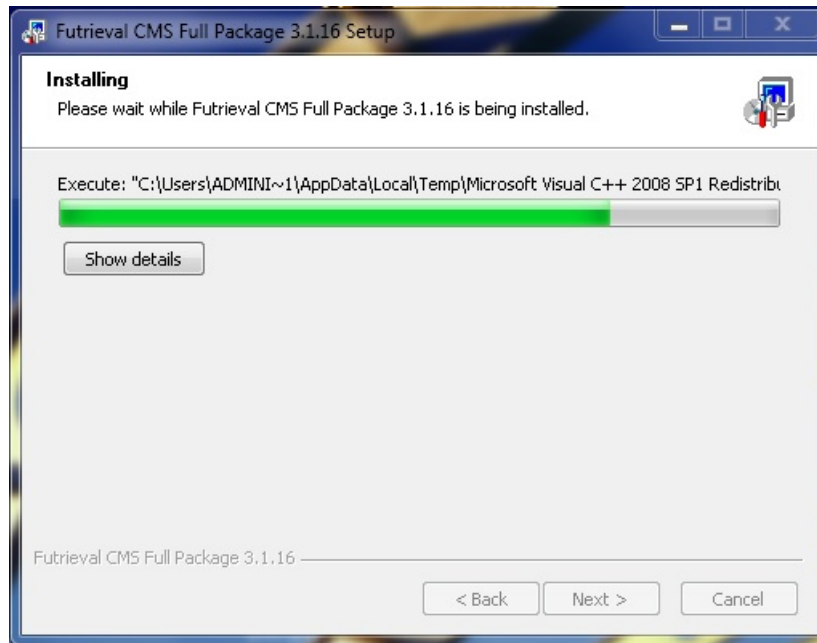


Figure 6: Step 5: Installation in Progress

- vi. Click Finish to complete the installation of Review Station:

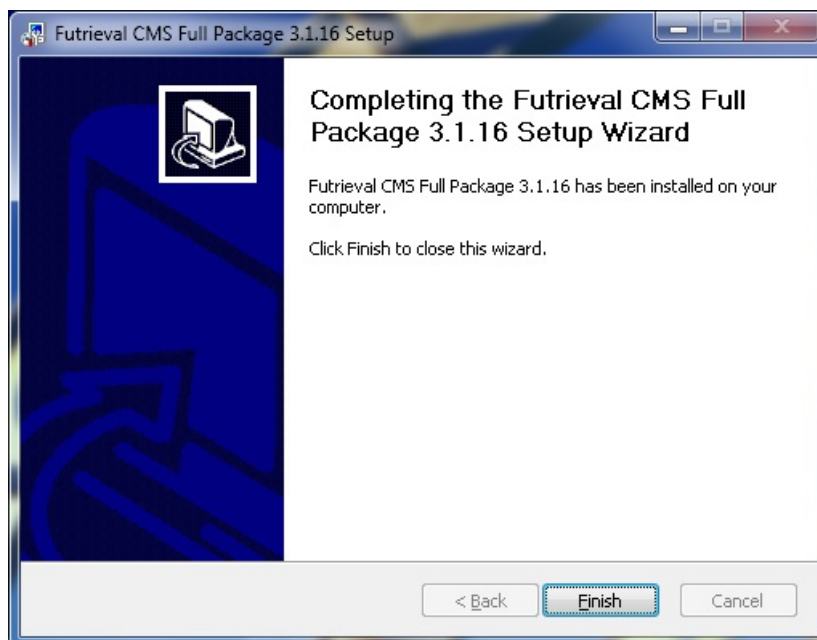


Figure 7: Step 6: Completing the Installation of Review Station

- (b) After installation, the following program shortcut will be created and placed on the Windows desktop automatically:

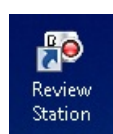


Figure 8: Review Station Icon Created

3. Logon

- Before logging onto Review Station (RS), appropriate system information and user privileges must have been firstly configured in the Futrieval™ Control Centre (CC).
- Double-click the RS icon  located on the Windows desktop, the following logon screen will pop up.
- Type in User ID, Password and IP address of the Master Server which contains the system database:

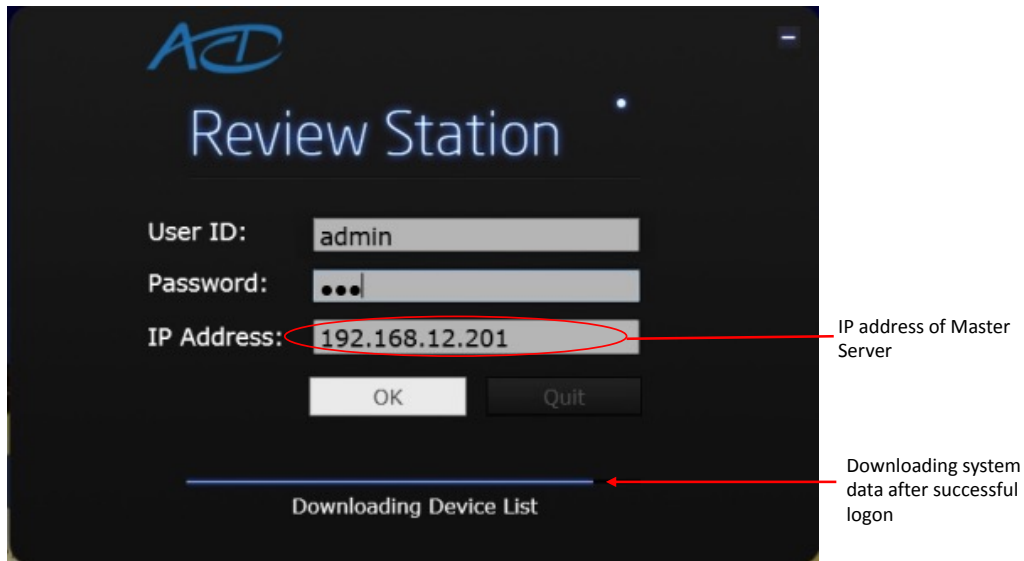


Figure 9: RS Logon

- Then press “OK” and after successful logon, it will start downloading the system information and corresponding user privileges as shown in Figure 9.
- After successful logged onto RS, the following main screen will appear:

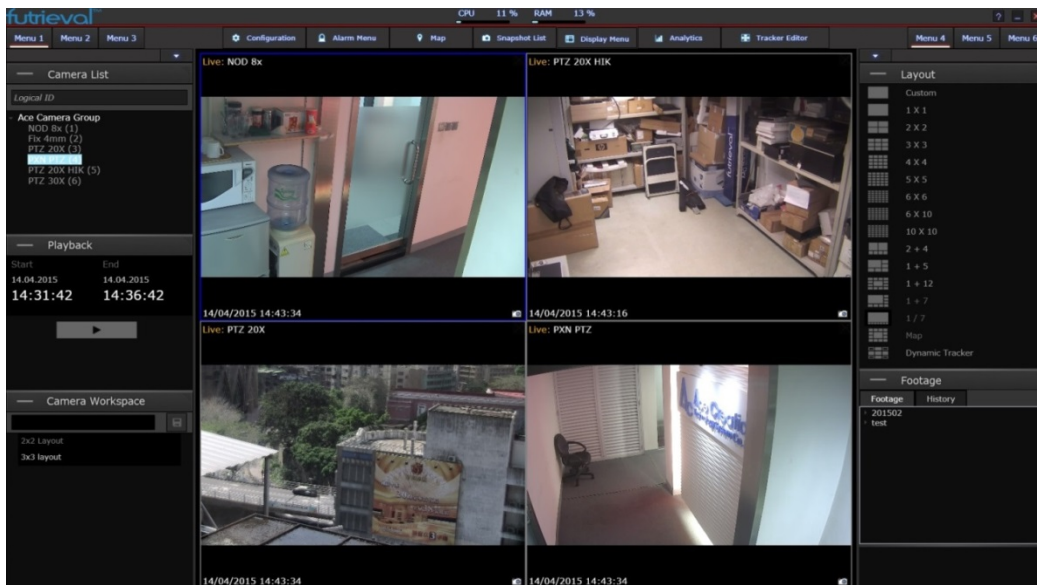


Figure 10: RS Main Screen

- The last selected camera images and display layout (before the last logout) will be remained.

4. RS Configuraton

- (a) Prior to operating the **Futrieval™ Review Station (RS)**, user must configure the RS in the **Configuration** which is located on the top menu bar of the RS GUI.

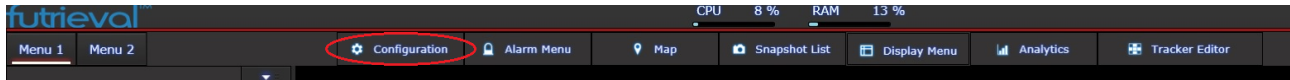


Figure 11: RS Configuration

NOT: RS Configuration is only available and visible to the user with Administrator right only.

- (b) The main setup page will be displayed as follows:

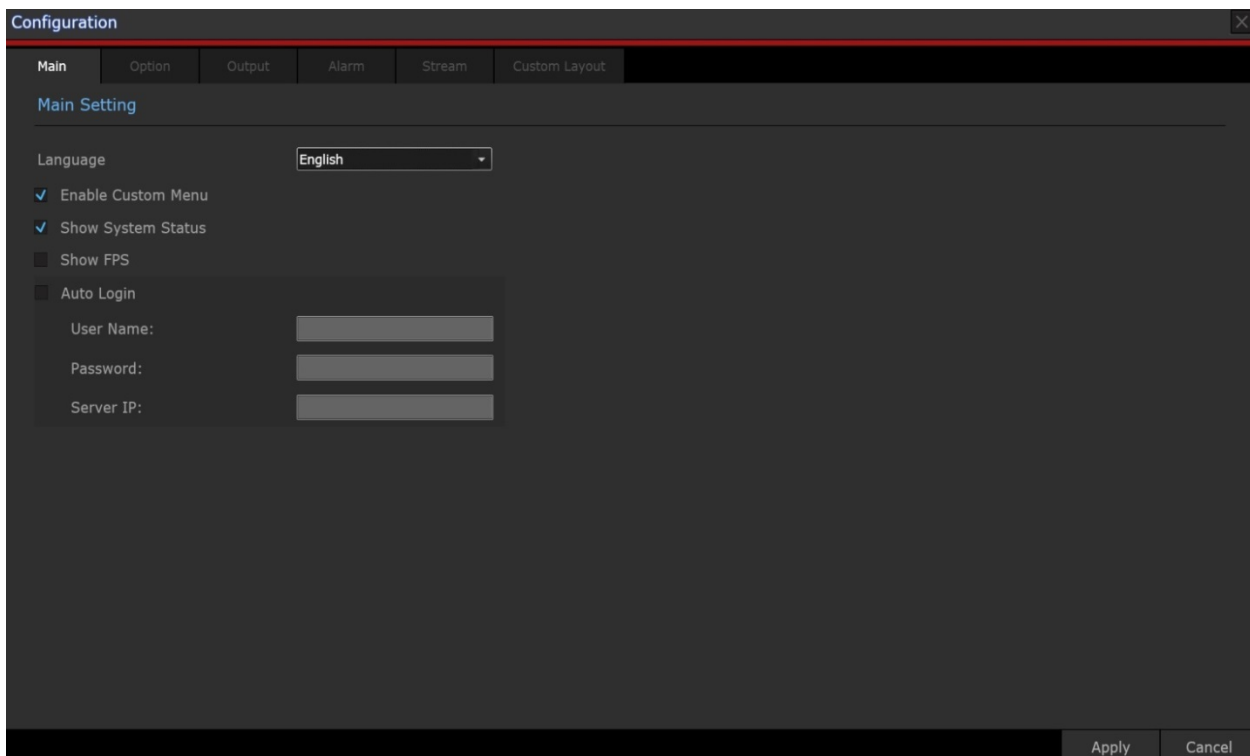


Figure 12: Configuration – Main Setting

- (c) There are 6 menu setup tabs in the Configuration: Main, Option, Output, Alarm, Stream and Custom Layout.

4.1. Main

- (a) There are currently 4 languages available for selection, i.e. English, Chinese (traditional), Chinese (Simplified) and Korean.

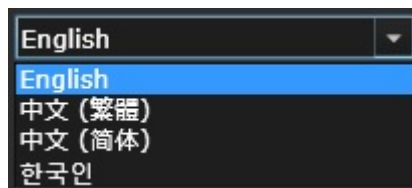
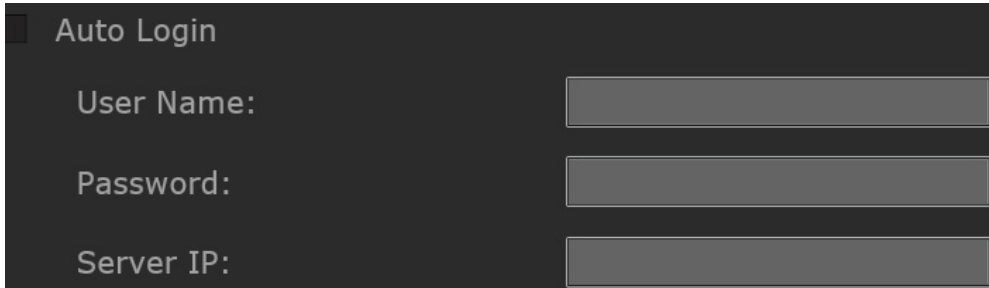


Figure 13: Language Selection

- (b) Once the language has been selected and applied, the RS GUI will change to the selected language automatically.
- (c) In this page, the following options are available:

- i. **Enable Custom Menu:** This allows user to configure the menu tabs in the RS.
- ii. **Show System Status:** This allows user to receive system status on RS.
- iii. **Show FPS:** This will indicate frame rate on the video stream.
- iv. **Auto logon:** This allows logon automatically after restarting RS.



☐ Auto Login

User Name:

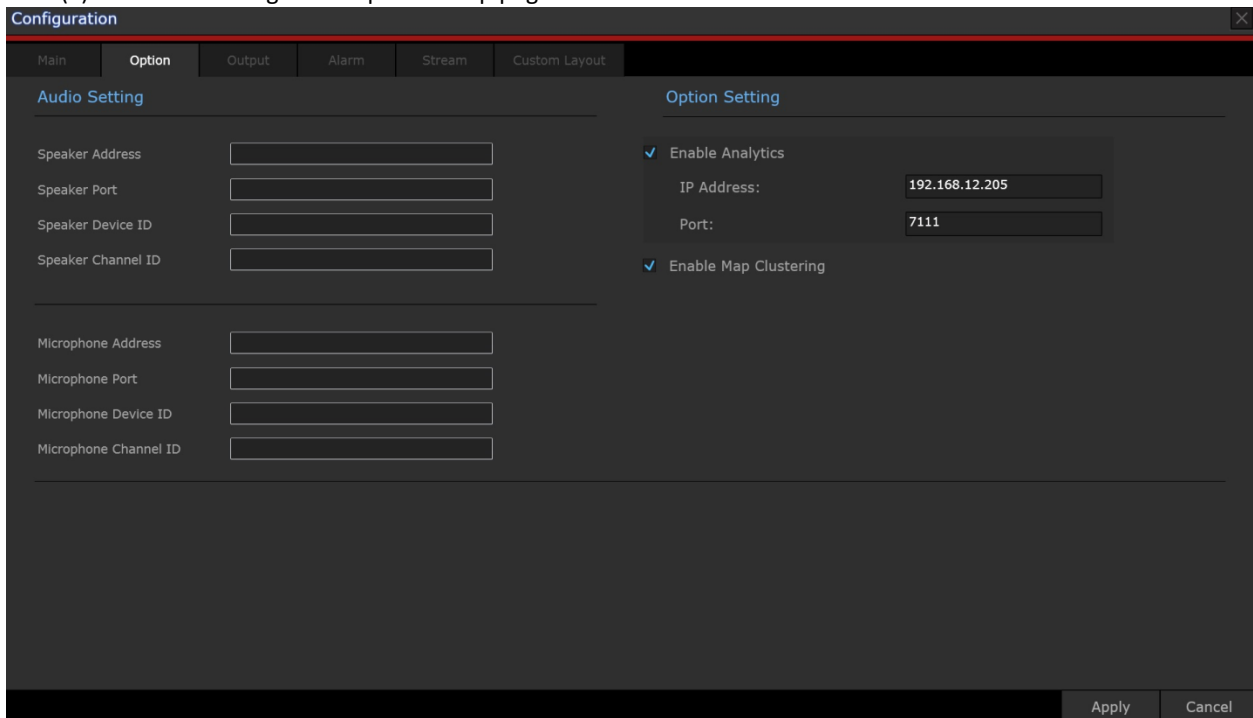
Password:

Server IP:

Figure 14: Auto Logon

4.2. Option

- (a) The following is the Option Setup page:



Configuration

Main | **Option** | Output | Alarm | Stream | Custom Layout

Audio Setting

Speaker Address:

Speaker Port:

Speaker Device ID:

Speaker Channel ID:

Microphone Address:

Microphone Port:

Microphone Device ID:

Microphone Channel ID:

Option Setting

☒ Enable Analytics

IP Address:

Port:

☒ Enable Map Clustering

Apply Cancel

Figure 15: Configuration – Option

- i. **Audio Setting:** If the Futrieval system is equipped with bi-directional audio facility, this page requires inputting the IP address and port number of the machine (in which the Software Adapter is located) that hosts the speaker and microphone.
 - ii. **Enable Analytics:** IP address and port number of Narrator (Analytic Server) for video analytic functions.
 - iii. **Enable Map Clustering:** The group of cameras in close proximity will be represented by a cluster icon.
- (b) Pressing “**Apply**” will save the changes and apply the setting immediately.

4.3. Output

- (a) The following is the Output setting page that allows user to specify the paths of Export and Snapshot folders.

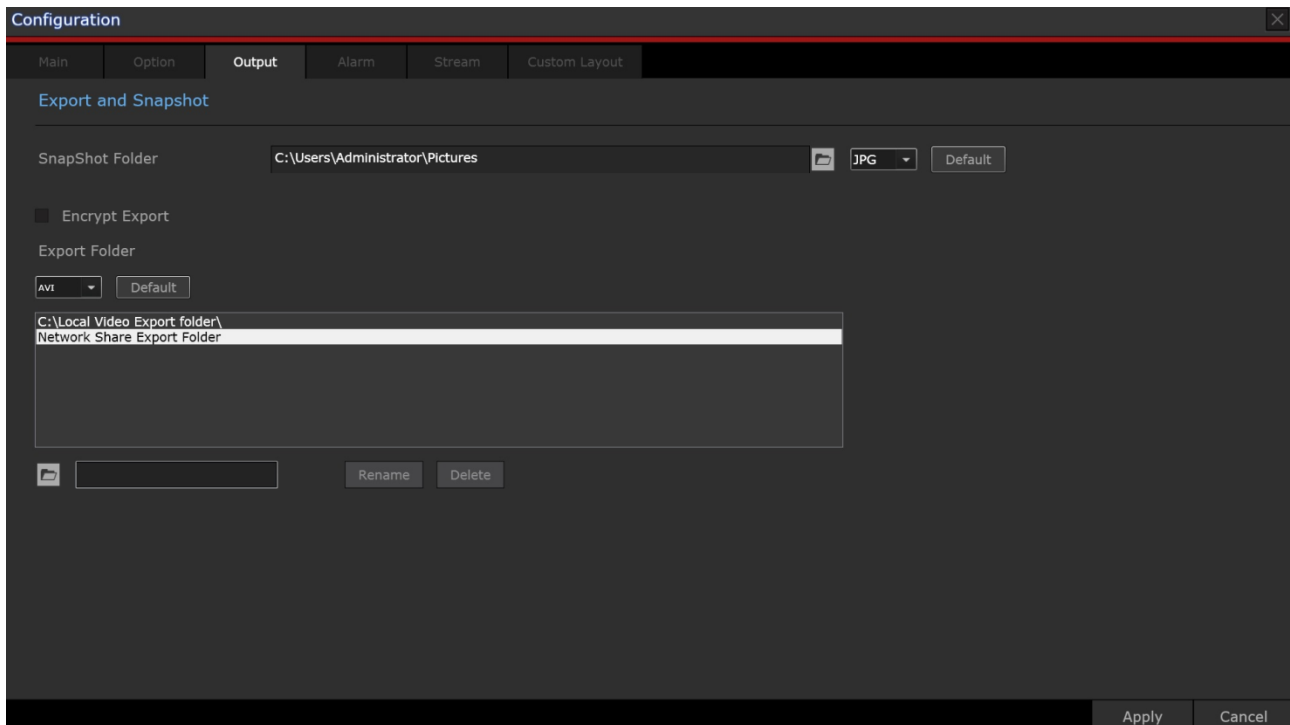


Figure 16: Configuration - Output

- i. **Snapshot Folder:** Specify the path of snapshot folder and format of snapshot picture (JPG and BMP). The default is in JPG.



- ii. **Encrypt Export:** Once this is checked, the exported video can only be played back by **Futrieval™ CMS standalone Player**.
- iii. **Export folder:** Specify the path of export folder and format of exported video (AVI). You can specify more than one exporting patch and name it. NOTE: The export path can be made from local drive and network map drive from a file archiving server over network.

- (b) Pressing “**Apply**” will save the changes and apply the setting immediately.

4.4. Alarm

- (a) The following is the Alarm setting page that configures what type of alarms and priority levels to be shown on the RS.

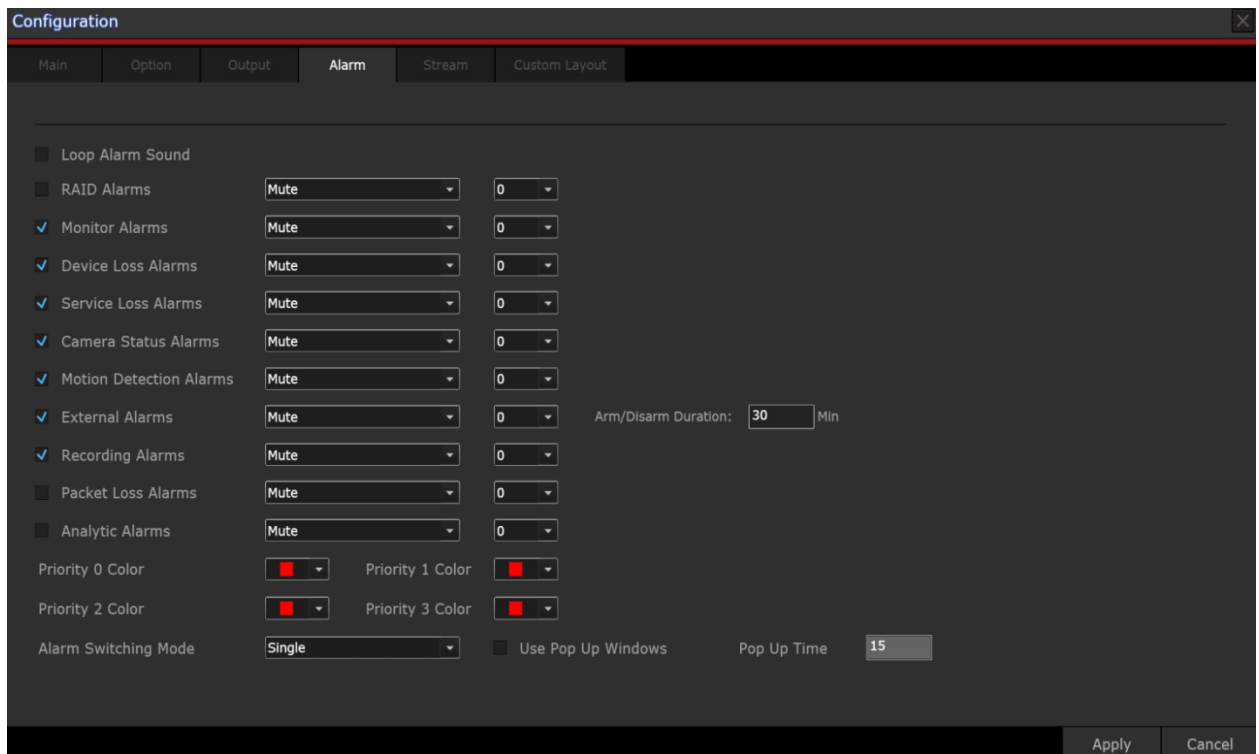


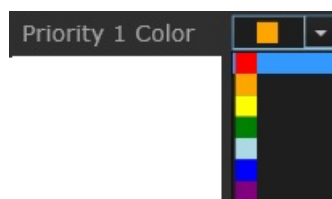
Figure 17: Configuration - Alarm

- (b) There is a total of 10 different alarm types: RAID, Monitor, Device Loss, Service Loss, Camera Status, Motion Detection, External, Recording, Packet Loss and Analytics.

Alarm Type	Description
RAID Alarms	Alarm for hard disk RAID
Monitor Alarms	Alarm for the monitor of the Decoder PC
Device Loss Alarms	Alarm for loss of communication to such devices as NVR, camera and VMS
Service Loss Alarms	Alarm for loss of communication with software adapter and Master Server
Camera Status Alarms	Alarm for analogue camera loss with video encoder
Motion Detection Alarms	Alarm for motion detection coming from the camera
External Alarms	External dry contact alarm from external devices; User can specify the duration in minute for temporary disarming the external alarm
Recording Alarms	Alarm generated from recorder
Packet Loss Alarms	Data packet loss from the camera
Analytic Alarms	Alarm triggered from such as Object detection and unattended object detection

Table 2: Descriptions of Different Alarm Types

- (c) By ticking the box, user can enable individual alarm to be notified on the RS.
- (d) User can mute individual alarm alert or use the default alert sound for notification.
- (e) There are 4 priority levels: Priority 0, Priority 1, Priority 2, and Priority 3, whereby Priority 3 has the highest priority level and will overwrite the sounds of other Priority levels when it occurs.
- (f) User can assign different colour for different priority for easy identification.



- i. **Loop Alarm Sound:** Default is unchecked that the alarm will sound for few seconds. If checked, it will enable the alarm to be sounded repeatedly until it is disabled by user in the Alarm Menu.

ii. **Alarm Switching Mode:** There are two alarm switching modes – Single and Sequence.

- For Single, when an alarm occurs, it will automatically display the alarm onto the first window. If the second alarm occurs when the first alarm is still active, it will overwrite and display the alarm video on the same window.
- For Sequence, when an alarm occurs, it will show the alarm onto the first none-alarmed window. If the second alarm occurs, it will display on next available window that is not alarmed. If all windows are used for alarm, it will cycle back to using the first window.

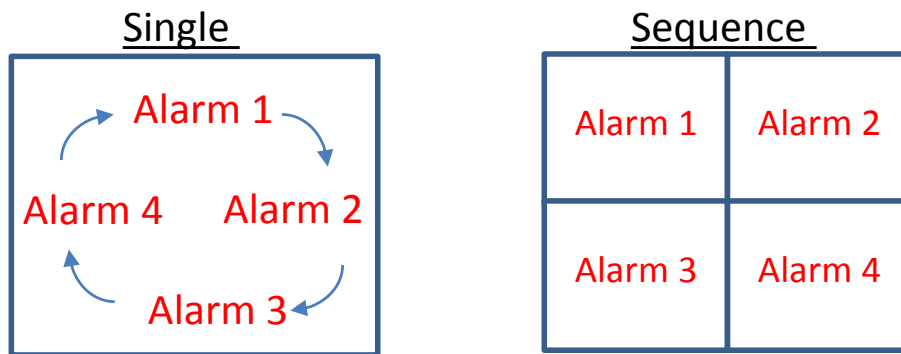


Figure 18: Alarm Switching Mode

iii. **Use Pop Up Windows:** Once checked, this will allow the alarm to be popped on a separate Window on top of the GUI.

iv. **Pop Up Time (in second):** The pop up window will disappear when time is up.

(g) Pressing “**Apply**” will save the changes and apply the setting immediately.

4.5. Stream

(a) The following is the Stream setup page that configures the video streaming related setting.

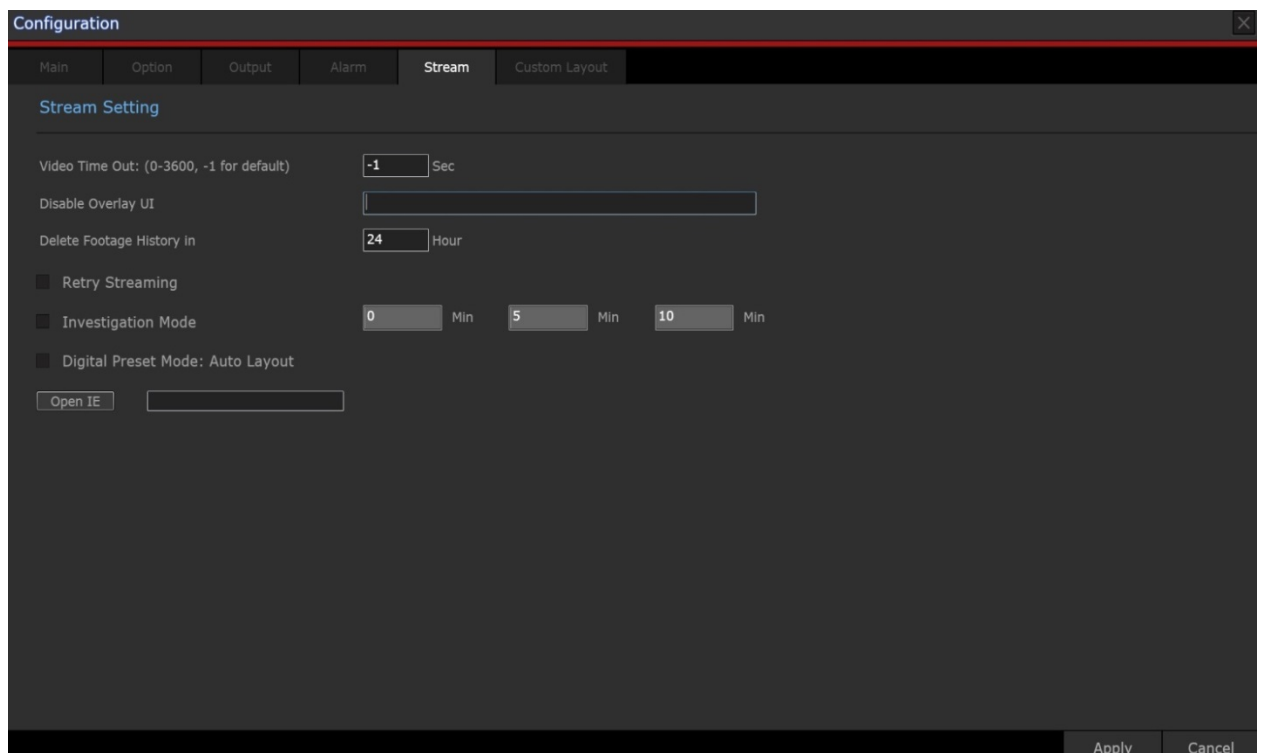


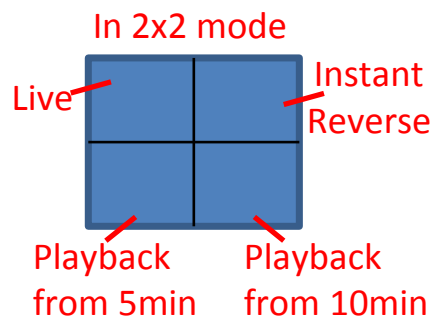
Figure 19: Configuration - Stream

- i. **Video Time Out: (0-3600, -1 for default):** Time out (in second) of trying to connect to the video stream
- ii. **Disable Overlay UI:** This uses to remove camera name, time stamps etc. on individual video window. The Format "window no.; window no.; window no." i.e. 1;3;4;5;6 will disable UI on video windows 1, 3, 4, 5 and 6 respectively.

Disable Overlay UI

- iii. **Delete Footage History in:** By default, footage history will be deleted in 24 hours.
- iv. **Retry Streaming:** Retry of video streaming
- v. **Investigation Mode:** If enabled, the "Investigation Playback" button will be enabled in the Playback Menu that allows user to play back the selected camera image in the following display layout:

☒ Investigation Mode Min Min Min



NOTE: 0 is for Instant reverse playback.

- vi. **Digital Preset Mode: Auto Layout:** The Digital Presets (as described in section 9) will be called up and arranged automatically according to the actual positions of the presets on the layout. If unchecked, the camera presets will be called up and arranged according to the default layout.
- vii. **Open IE:** This allows user to type in the IP address of the camera and access to the camera Web setup directly.

4.6. Custom Layout

- (a) The following is the Custom layout setup page that allows to custom make your display layout.

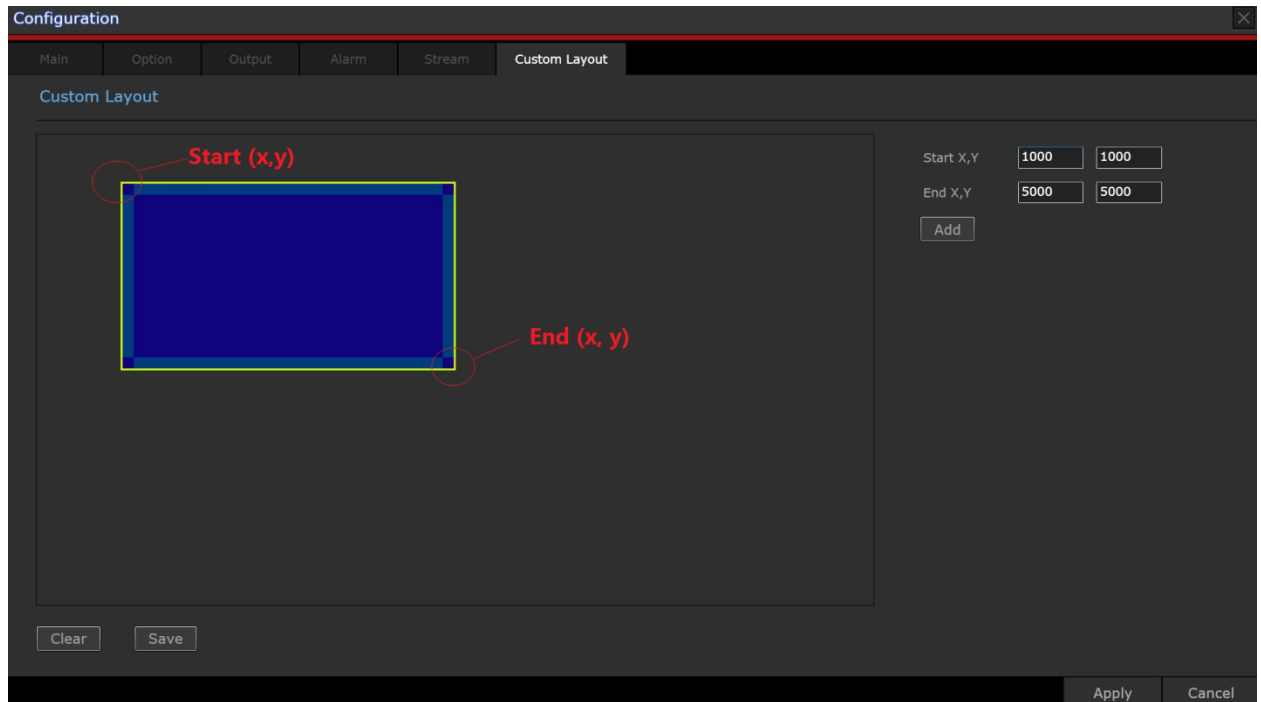


Figure 20: Configuration – Custom Layout

- i. Type in the X and Y coordinates for the Start and End points respectively. (X and Y range from 0 to 10000)
- ii. Press “Add”, a box will be drawn automatically as a display video window.
- iii. Type in another set of values to draw another box.
- iv. User can use mouse to resize and move the box around.
- v. Press “Save” to save the changes
- vi. Press “Clear” to clear the box(es).

5. Starting Review Station

5.1. Main GUI

- (a) After successfully login to **Futrieval™ Review Station (RS)**, it will start downloading the system information automatically from the Master Server:

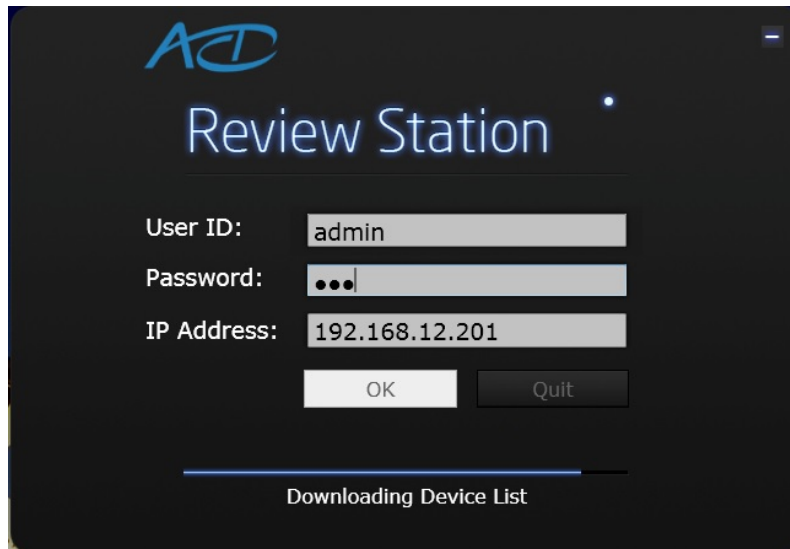


Figure 21: Successful Login

- (b) Then, the RS main GUI screen will appear. The description of the RS main screen layout is shown in **Error! Reference source not found..**

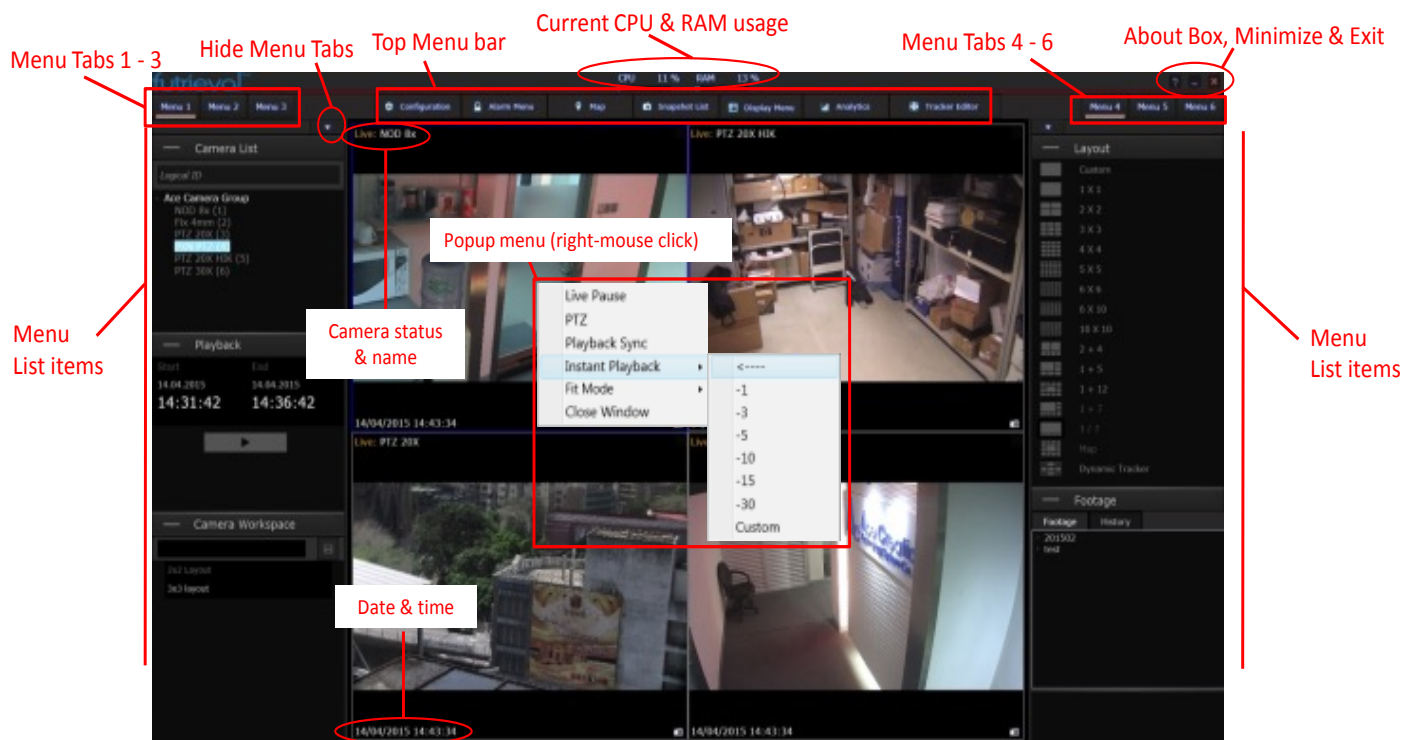
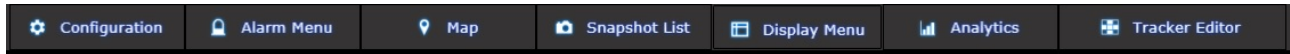


Figure 22: RS Main GUI with descriptions

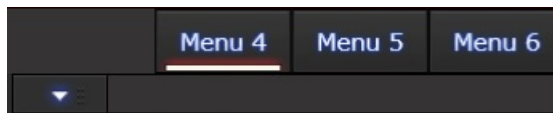
- (c) The main GUI is divided into the following main sections:
- Menu Tabs 1 – 3: Located at the left hand side of the main screen, whereby user can assign a maximum of 3 menu list items for each Menu Tab.



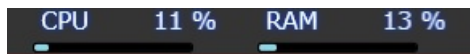
- ii. Top Menu Bar: Located at the top of the main screen. Except the Display Menu button, other Top Menu buttons will bring up another operating screen.



- iii. Display Layout – Located in the middle of the main screen for displaying live or playback videos
- iv. Menu Tabs 4 – 6: Located at the right hand side of the main screen, whereby user can assign a maximum of 3 menu list items for each Menu Tab.



- v. CPU & RAM Indication: Located above the Top Menu Bar that indicates the current CPU and RAM usage in the RS machine.

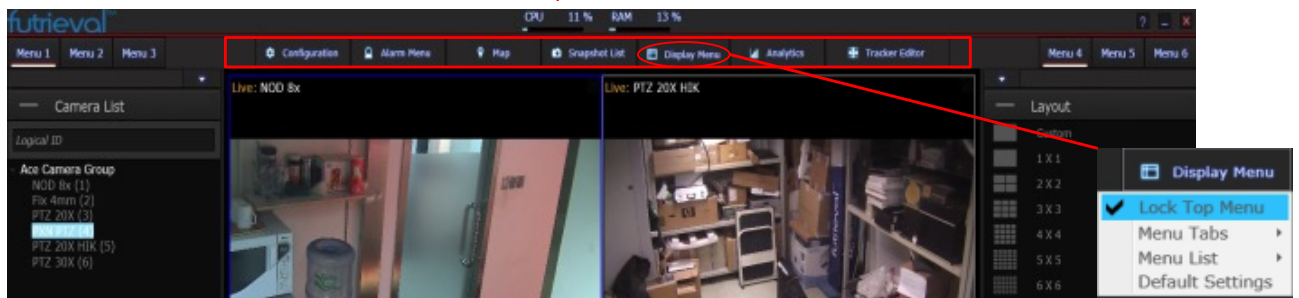


5.2. Lock & Unlock Top Menu

- (a) User can show or hide the Top Menu bar by selecting “Lock” or “Unlock” from the Display Menu button.

• Lock Top Menu Bar

Top Menu Bar



• Unlock Top Menu Bar



Figure 23: Lock & Unlock Top Menu Bar

- (b) Once Unlock is selected, the Menu Tabs 1 – 3, Top Menu bar, CPU & RAM Indication and Menu Tabs 4 – 6 will be hidden. When user moves mouse cursor onto the upper part of the main screen, they will be shown again.

5.3. Customizing Menu Tabs

5.3.1. Menu Tabs and Menu Lists

- (a) A total of six (6) Menu Tabs are available whereby each of the Menu Tabs can be shown or hidden in the main screen.

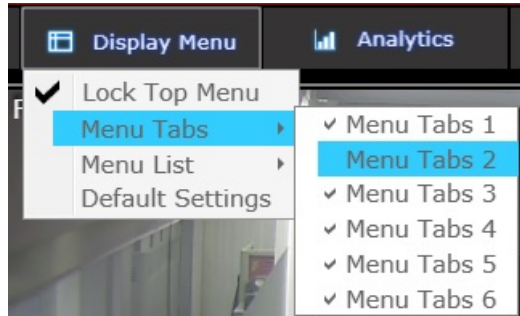


Figure 24: Six Menu Tabs

- (b) User can set up his or her own Menu List items in any of the six (6) Menu Tabs available.
- (c) There are currently total of 13 Menu List items available for selection from the Display Menu:

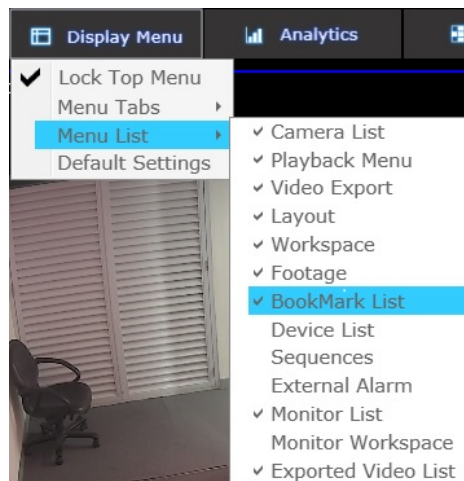


Figure 25: Menu List Items

- (d) User can simply drag and drop any desired Menu List item to any available Menu Workspace in the Menu Tab:

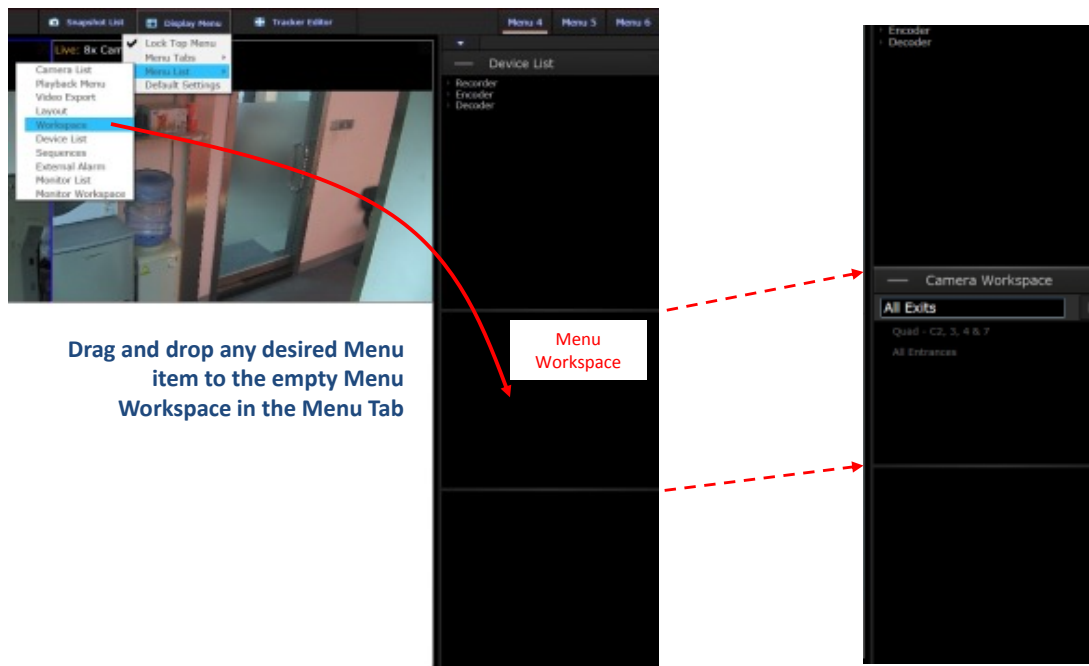


Figure 26: Assigning Menu List Item to the Menu Tab

- (e) A maximum of 3 Menu List items can be assigned to each Menu Tab:

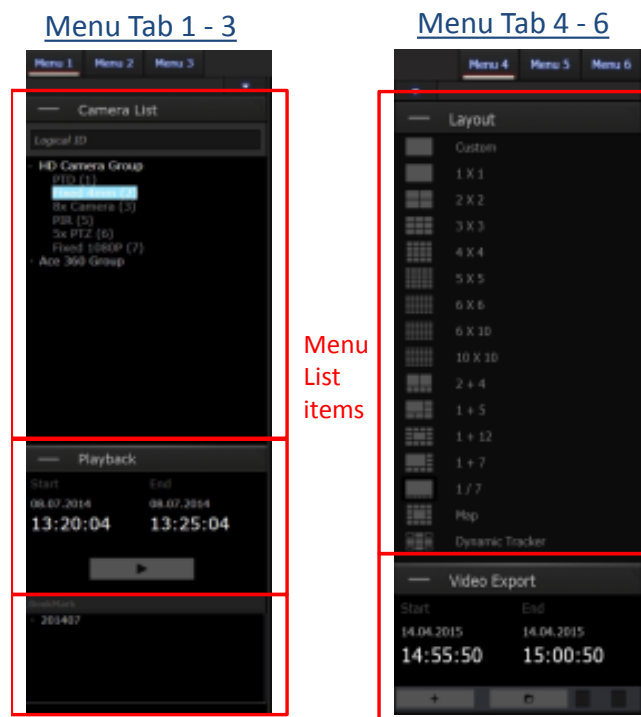


Figure 27: A Maximum of 3 Menu List Items for Each Menu Tab

- (f) User can minimize the Menu List item by clicking Menu List title bar:

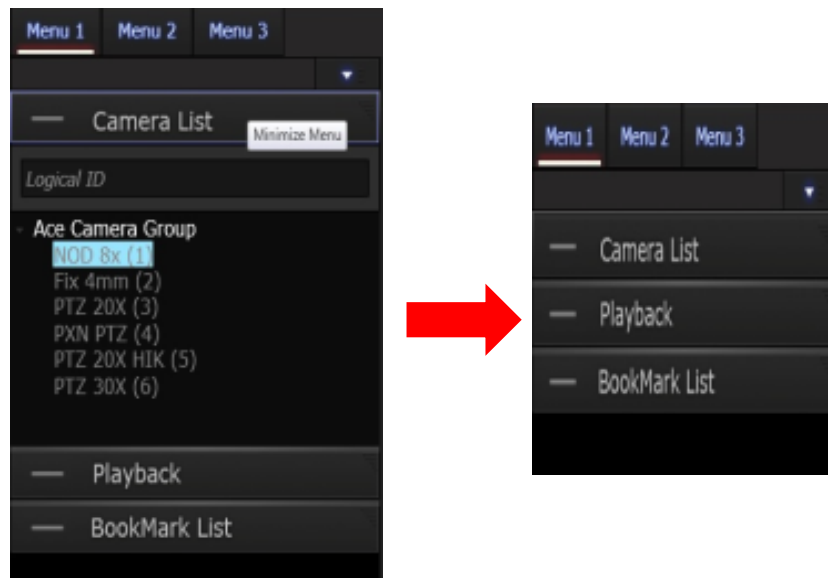
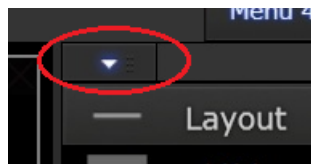


Figure 28: Minimize Menu List Item

- (g) User can hide the whole Menu List Items by clicking “Hide Menu List Items” on both sides of the Menu Tabs 1-3 and 4 - 6.



- (h) Once clicked, all the Menu list items are hidden. To show the Menu Lists again, simply click on Menu Tab.

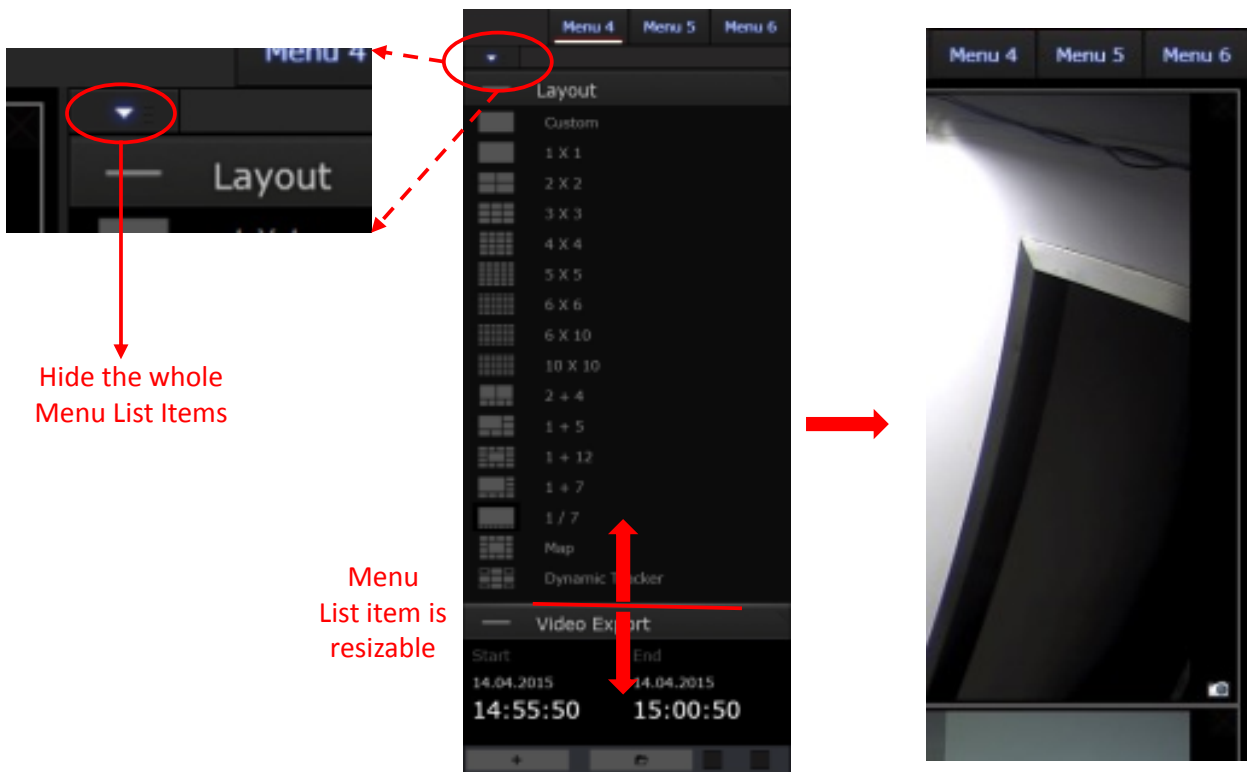
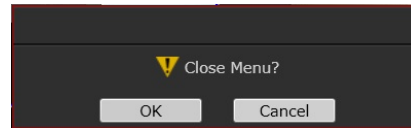
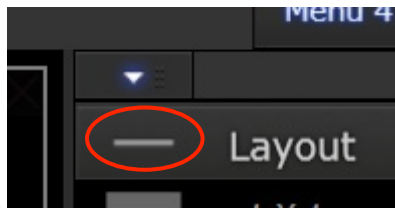


Figure 29: Closing Menu Tabs

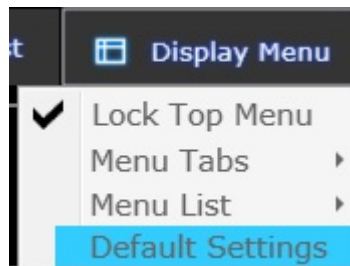
- (i) User can click “Close Menu List” button to close any Menu List item. Confirmation box will pop up.



- (j) Once the Menu List item is closed, if user wants to reselect the closed Menu List item again, he or she has to select from the Display Menu as shown in Figure 25.

5.3.2. Default Settings

- (a) User can select "Default Settings" to reset the Menu Item layout to default.



- (b) The following is the default Menu List Items:

Menu Tab 1	Menu Tab 2	Menu Tab 3	Menu Tab 4	Menu Tab 5	Menu Tab 6
Camera List	Layout		Playback	Video Export	
	Camera Workspace		Footage		
			Bookmark List		

Table 3: List of Default Menu Items

6. Start Live View

6.1. Camera list

- (a) To view the live video, user may simply drag and drop the camera from the Camera List on the Menu Tab to the displaying window, or double-click the camera to view the live video.

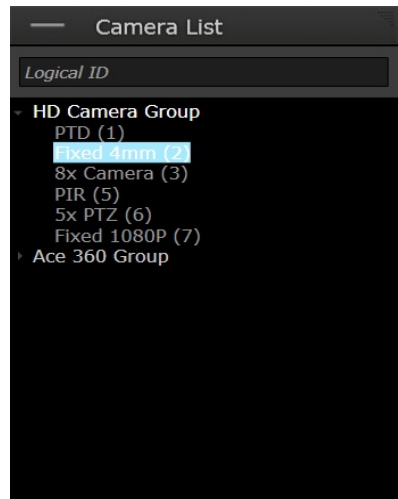


Figure 30: Camera List

NOTE: Unlimited number of camera groups can be created from the Control Centre (CC).

- (b) User can also type in the camera name (text or number) in the field below to filter out the desired camera(s) under the camera list.

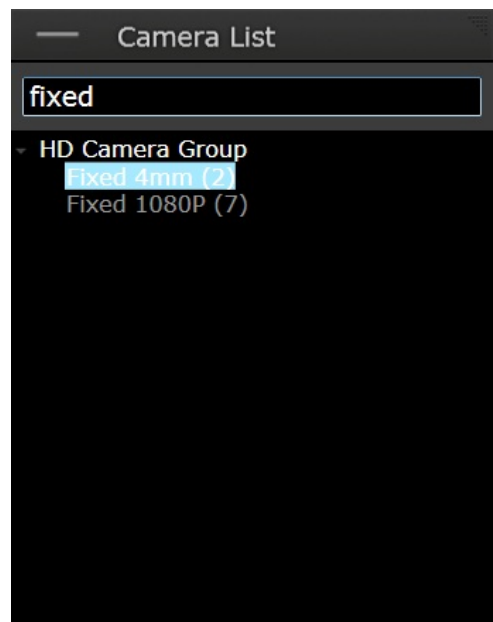


Figure 31: Camera List with filtering

- (c) When user moves mouse over on any of the camera items from the Camera List, the camera current status of that camera will appear.



Figure 32: Camera Status Checking

- (d) Camera is shown in Red if there is any error connecting to the camera. The error message such as "Streaming Failure" will be shown.



Figure 33: Camera Status Checking with Error

- (e) Once the camera displaying window is assigned to a camera, such window would automatically show the corresponding camera information, e.g. camera name and date & time.
- (f) Click "X" to close the selected video or right-click on the video window to select Close Windows.

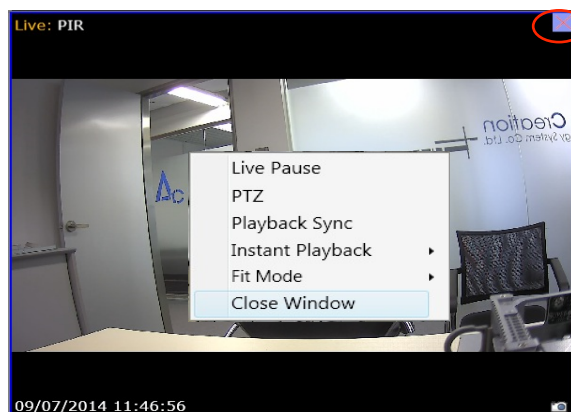


Figure 34: Closing a Video Window

6.2. Map GUI

- (a) Apart from accessing the live video from the Camera List, user can also get it from Map GUI.
 - i. Click “Map” button from the Top Menu Bar. The Map GUI will pop up.
 - ii. Double-click camera icon to show live video on the current active video window
 - iii. Or drag and drop the camera icon to any video window
- (b) When user moves mouse over on a camera icon, a live preview of that selected camera will show on the Map GUI.

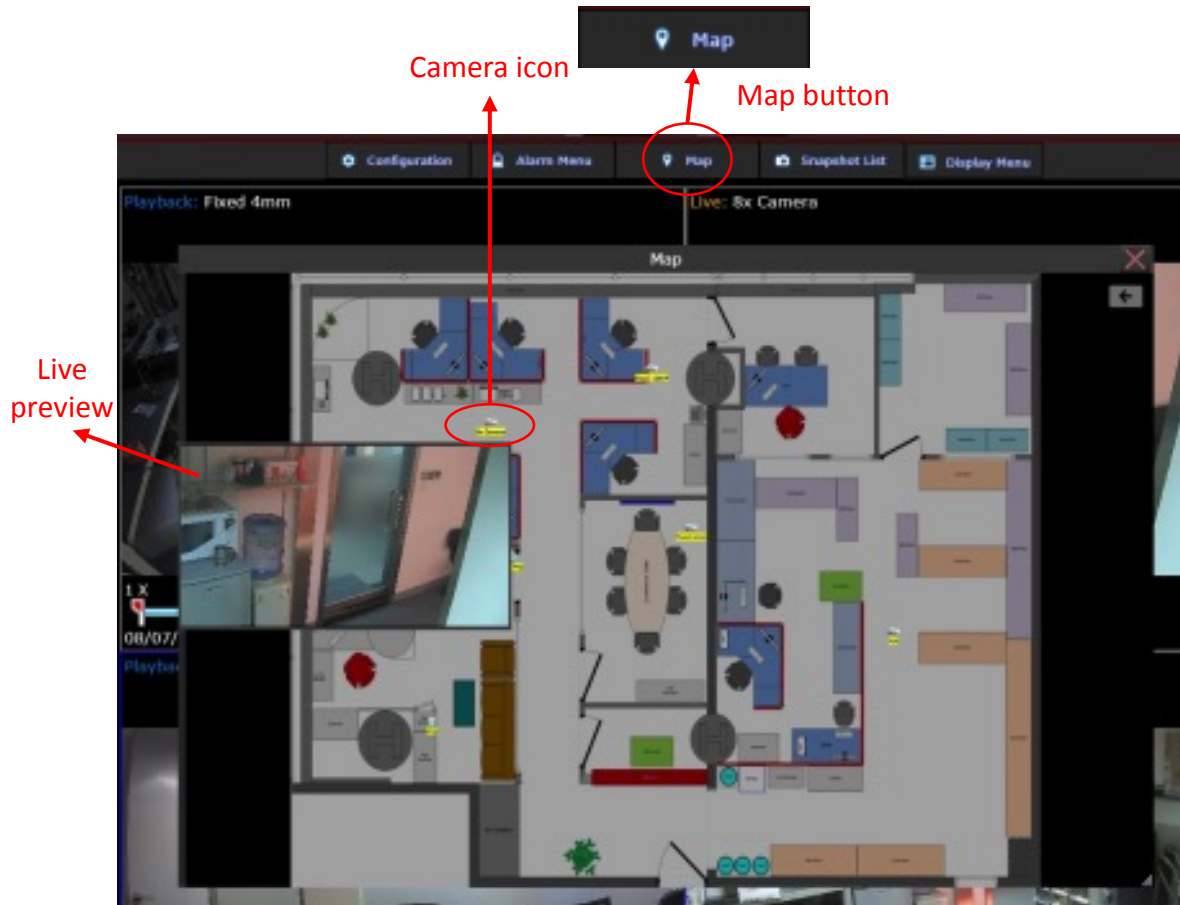


Figure 35: Map GUI

- (c) User can show or hide the Map controls.

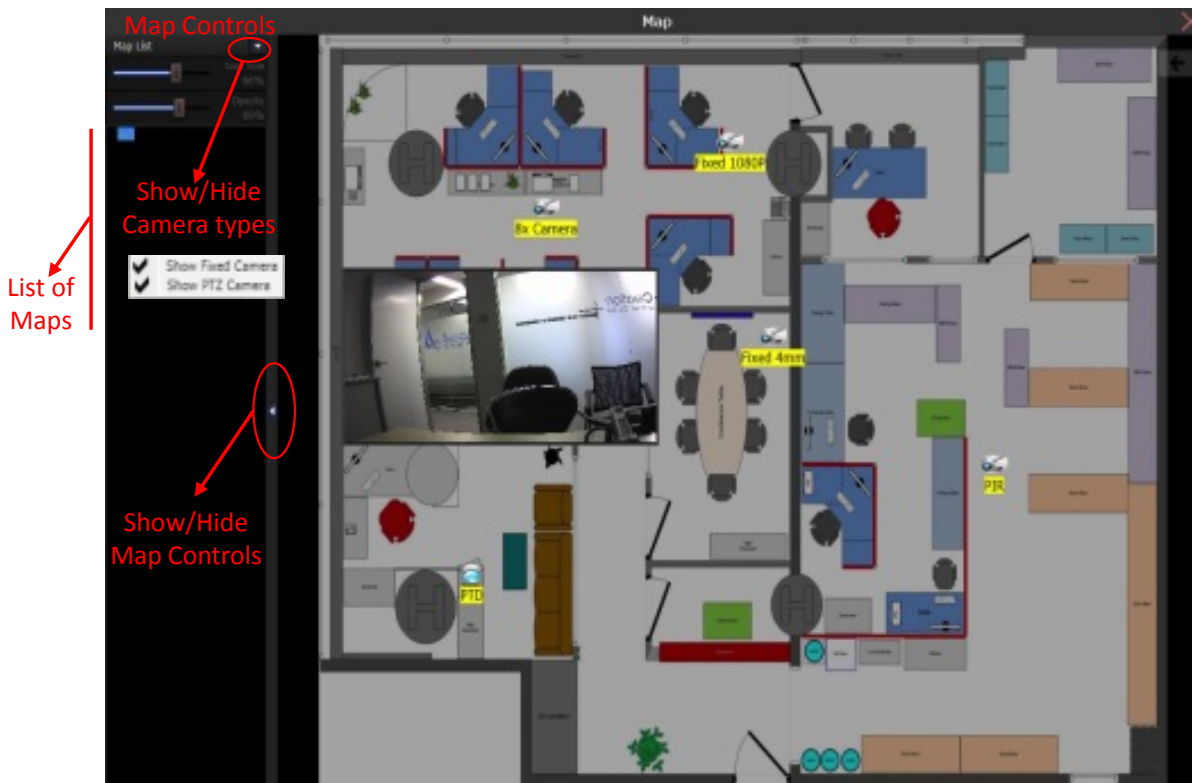
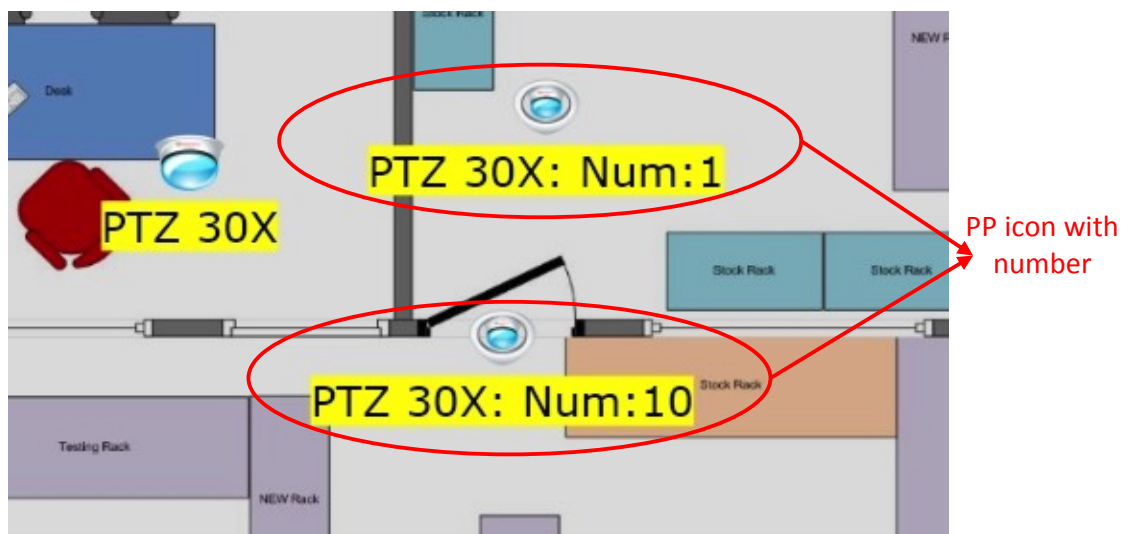


Figure 36: Map Controls

- i. Icon Size: User can adjust the scrolling bar to control the icon size or map opacity



- ii. Show/Hide Camera types:
- (d) User can right-click on the PTZ camera icon with preposition (PP) available. The PP icons for the PTZ camera will show automatically.



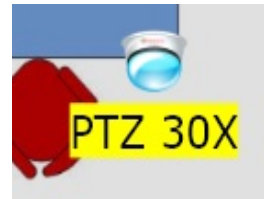
NOTE: PP can only be created in the Control Centre (CC).

Figure 37: PTZ Camera with Prepositions

- (e) If there is loss of connection for the camera, the camera icon will turn to Red colour.

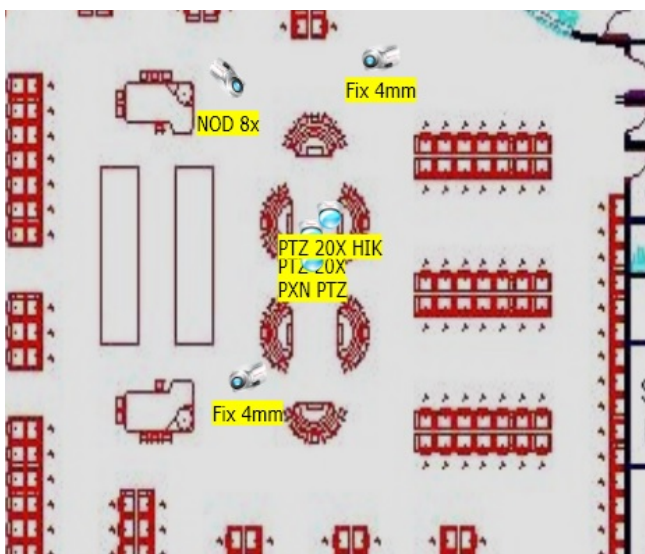
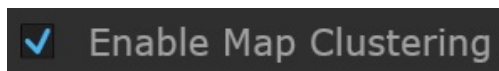


Loss of communication

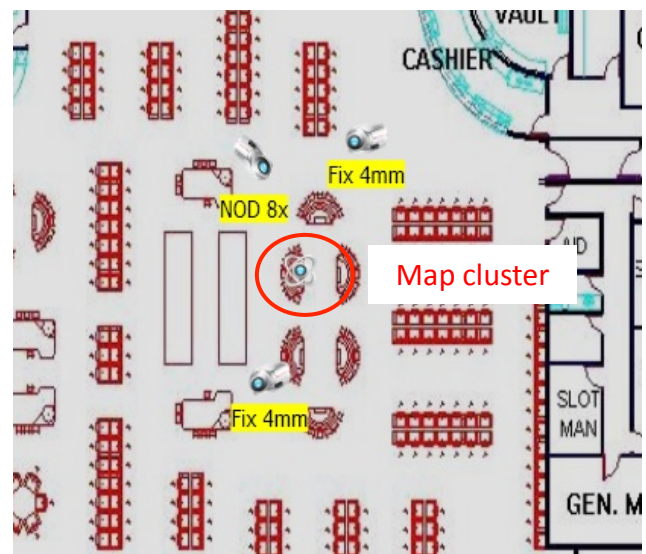


Normal

- (f) If Map Clustering in RS Configuration is enabled and when there are a large number of cameras in the map, the group of cameras in close proximity represented by a cluster icon, instead of all the camera icons being displayed.



Map Clustering Disabled



Map Clustering Enabled

Figure 38: Map Clustering

6.3. Live Pause

- (a) To pause a live video,
- Right-mouse click on the live video to call up Popup Menu
 - Select "Live Pause"

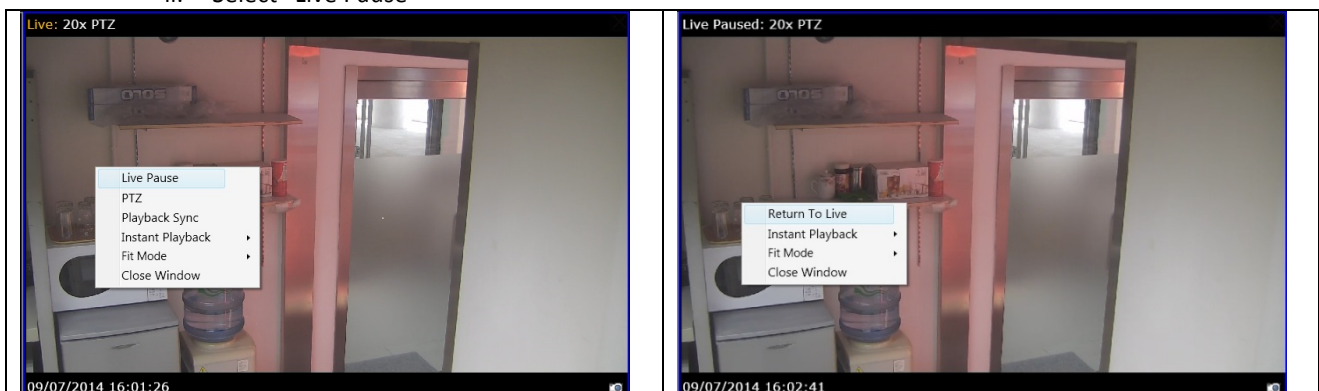


Figure 39: Popup Menu – Live Pause

- (b) Select "Return To Live" to return to live video.

6.4. Display Layout

(a) RS provides different display layout formats that can be selected from the Menu List:

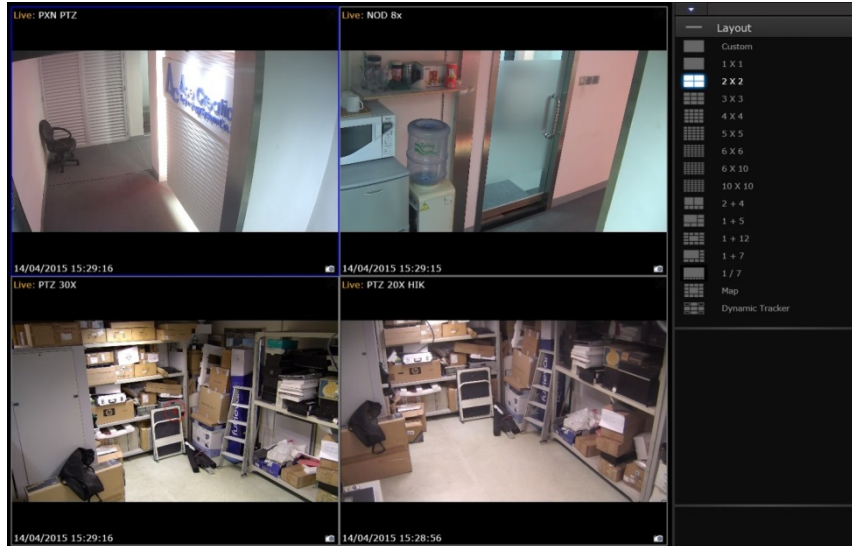
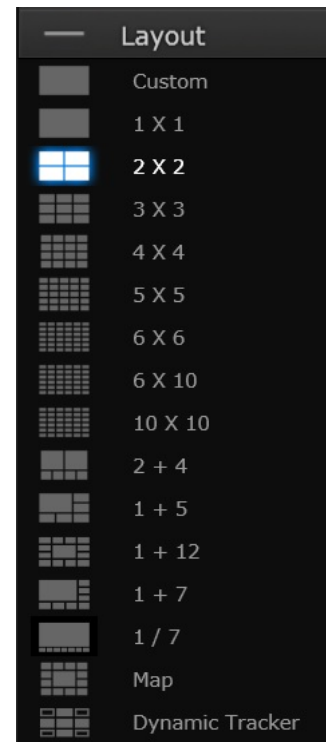


Figure 40: Display Layout in Quad

(b) The description of each display layout is shown in the following table.

Button	Description
 Custom	Custom display layout; More description will be covered later in this section.
	1x1: Single-channel mode
	2x2: 4-channel (quad) mode
	3x3: 9-channel mode
	4x4: 16-channel mode
	5x5: 25-channel mode
	6x6: 36-channel mode
	6x10: 60-channel mode
	10x10: 100-channel mode
	2+4 display mode
	1+5 display mode
	1+12 display mode
	1+7 display mode
	1 / 7 display mode
	Map
	Dynamic Tracker; More description will be covered in section.



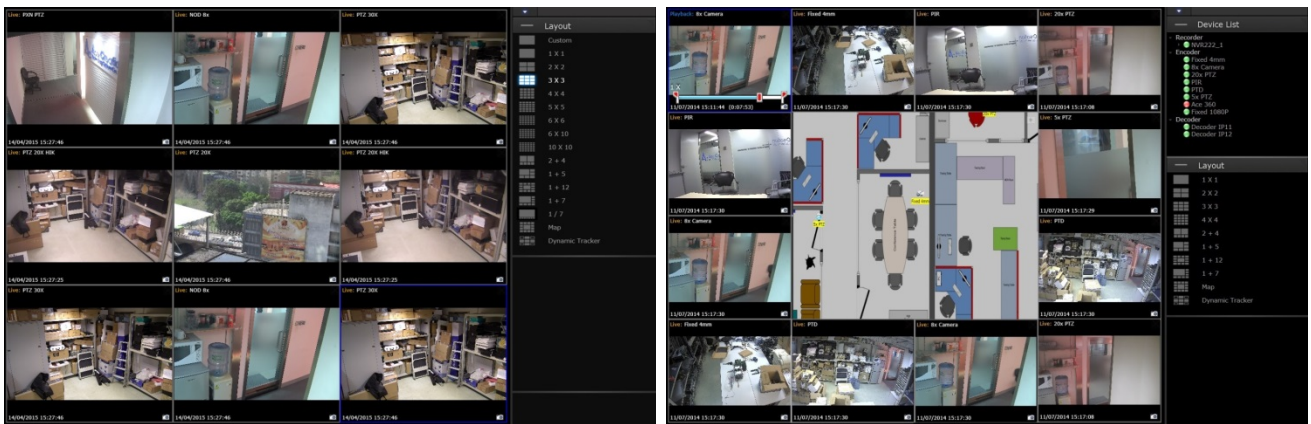


Figure 41: Sample of Display Layouts (3x3 and Map)

- (c) As shown in Figure 41, user can select display layout in 12-split viewing titles and map in the middle.



- (d) The maximum of viewing tiles available is 10x10 that provides 100-channel display layout.

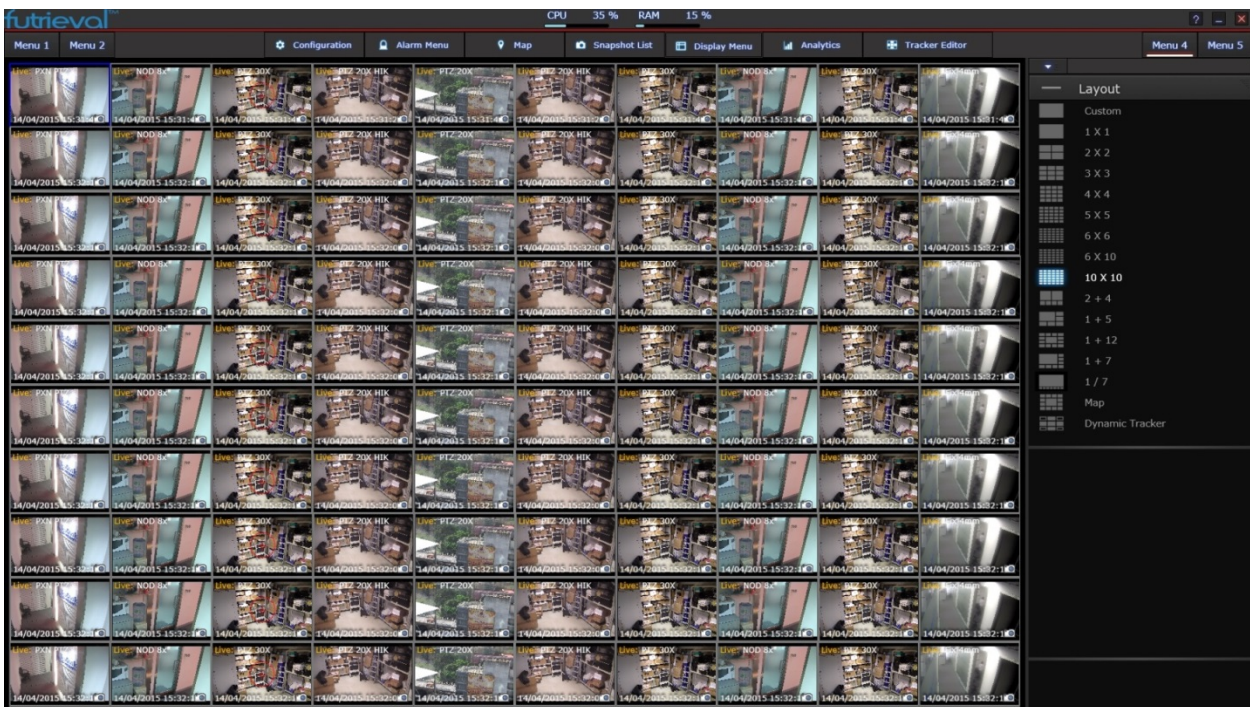


Figure 42: 10x10 Display Layouts

- (e) User may also make his or her own display layout that is needed to be made in the “Custom Layout” of RS Configuration by Administrator as described in section 4.6.

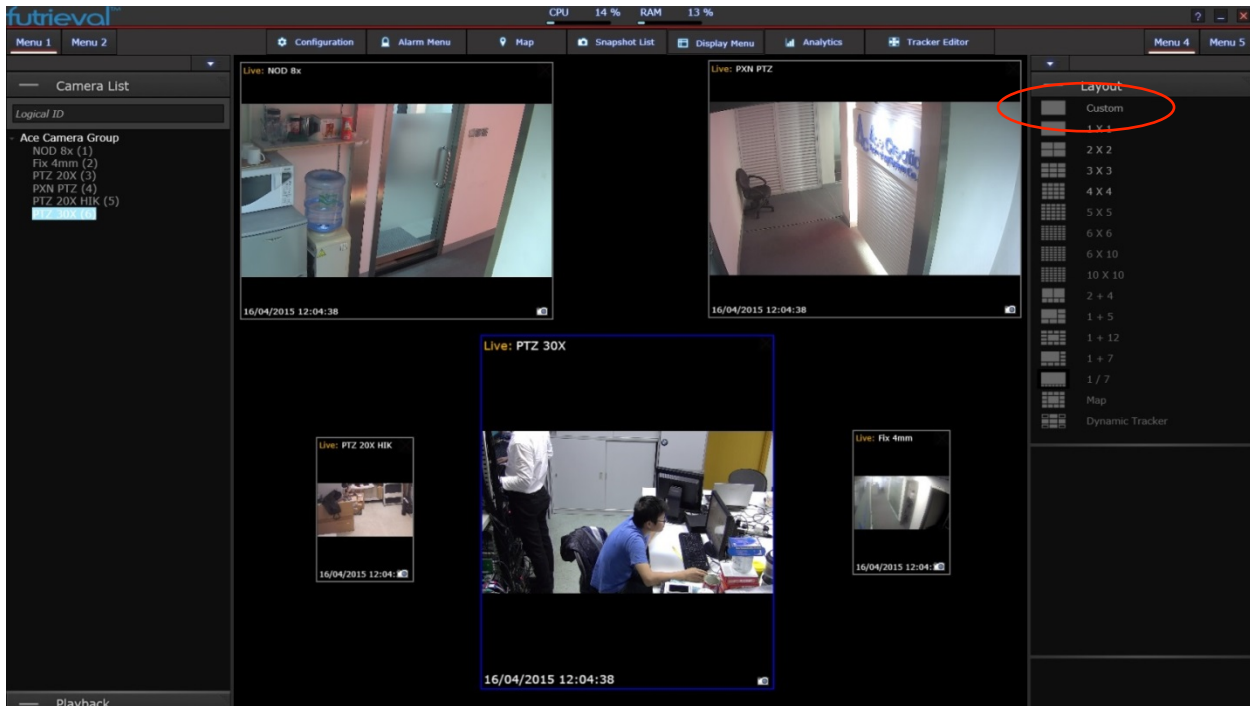


Figure 43: Custom Layout

6.5. Swapping Camera Images

- User can swap camera images between two viewing tiles on any display layout.
- To swap camera images (e.g. PTD and 20x PTZ) between tile 1 to tile 4 as shown in Figure 44 and Figure 45.
 - Hold down left mouse in target window,
 - Click and drag video to new location and release mouse

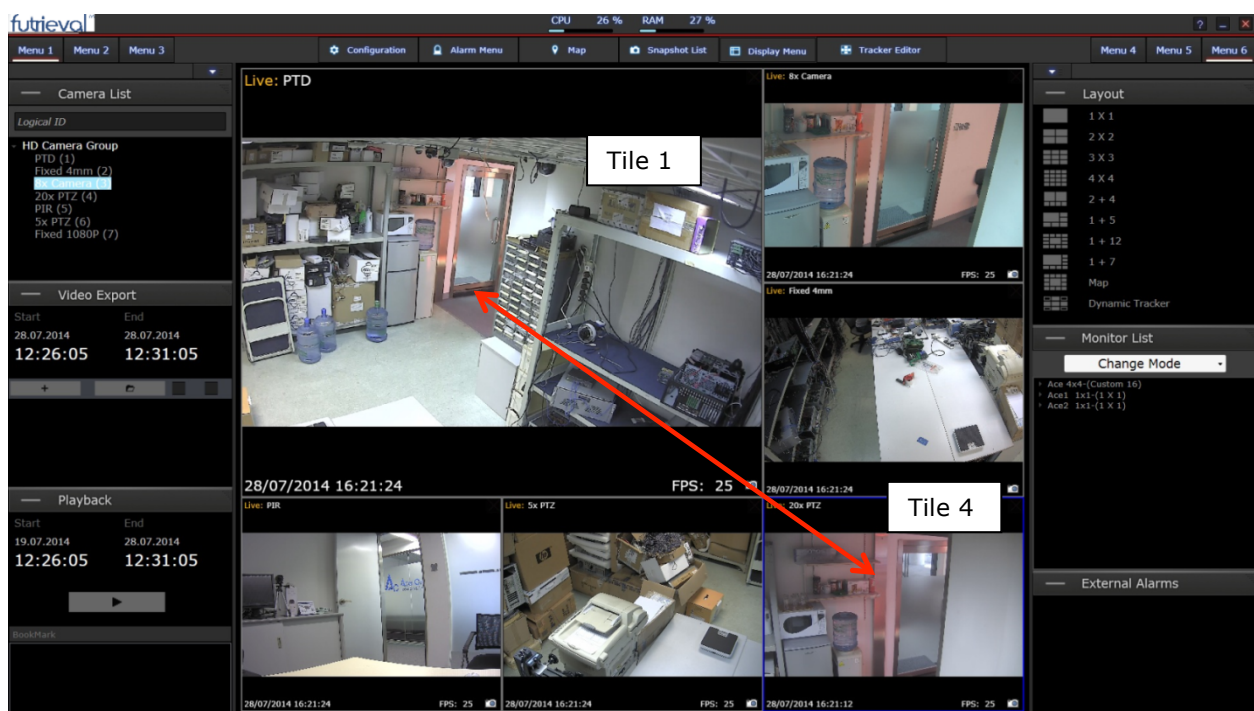


Figure 44: Swapping Camera Image (1)

- The camera images displaying in tile1 and tile 4 have been swapped as shown in Figure 45 below.

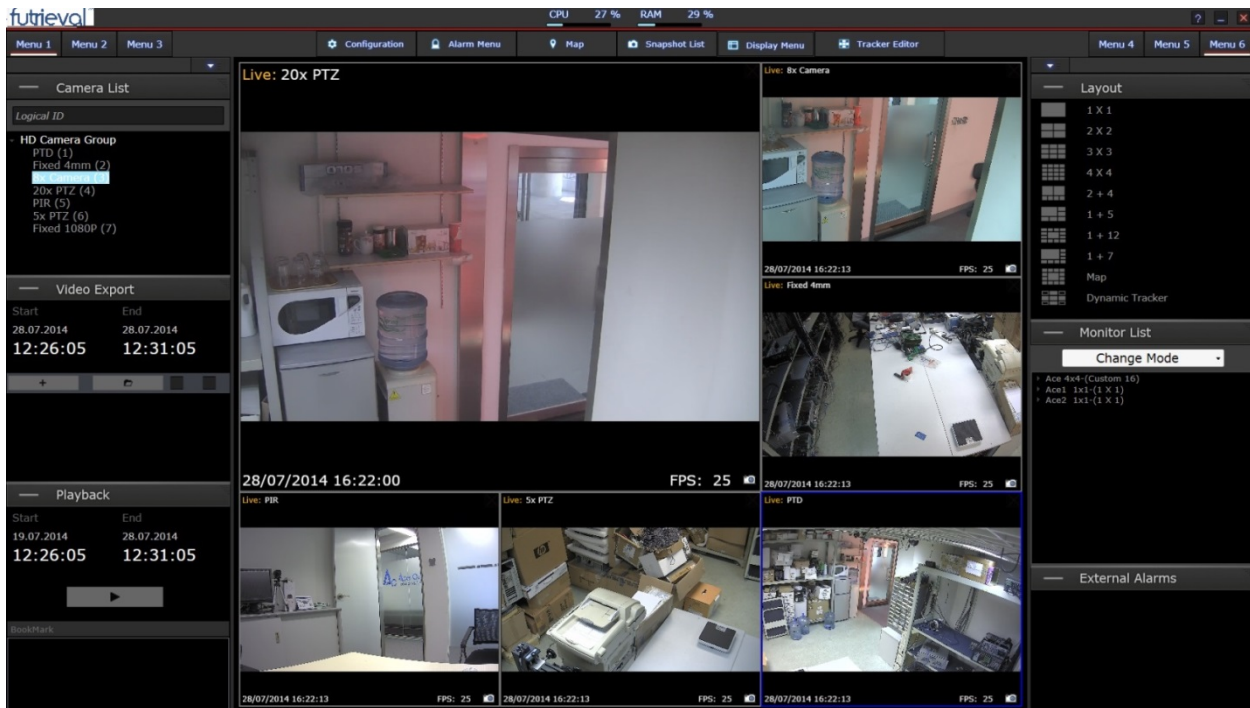


Figure 45: Swapping Camera Image (2)

6.6. Camera Workspace

- (a) To create a Camera Workspace template to the Menu list:
 - i. Select a Display Layout
 - ii. Drag and drop the desired cameras to individual viewing tiles



Figure 46: Creating a Workspace

- iii. Type in a preferred name and click "Save"

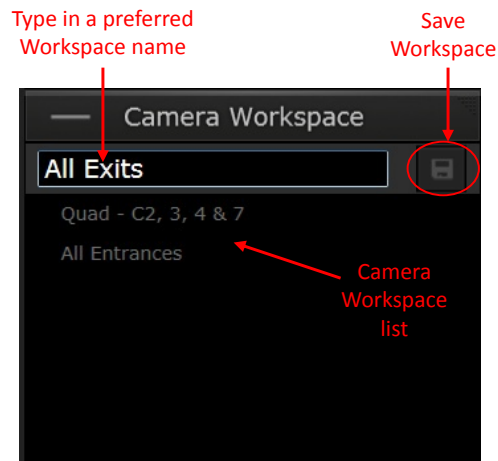
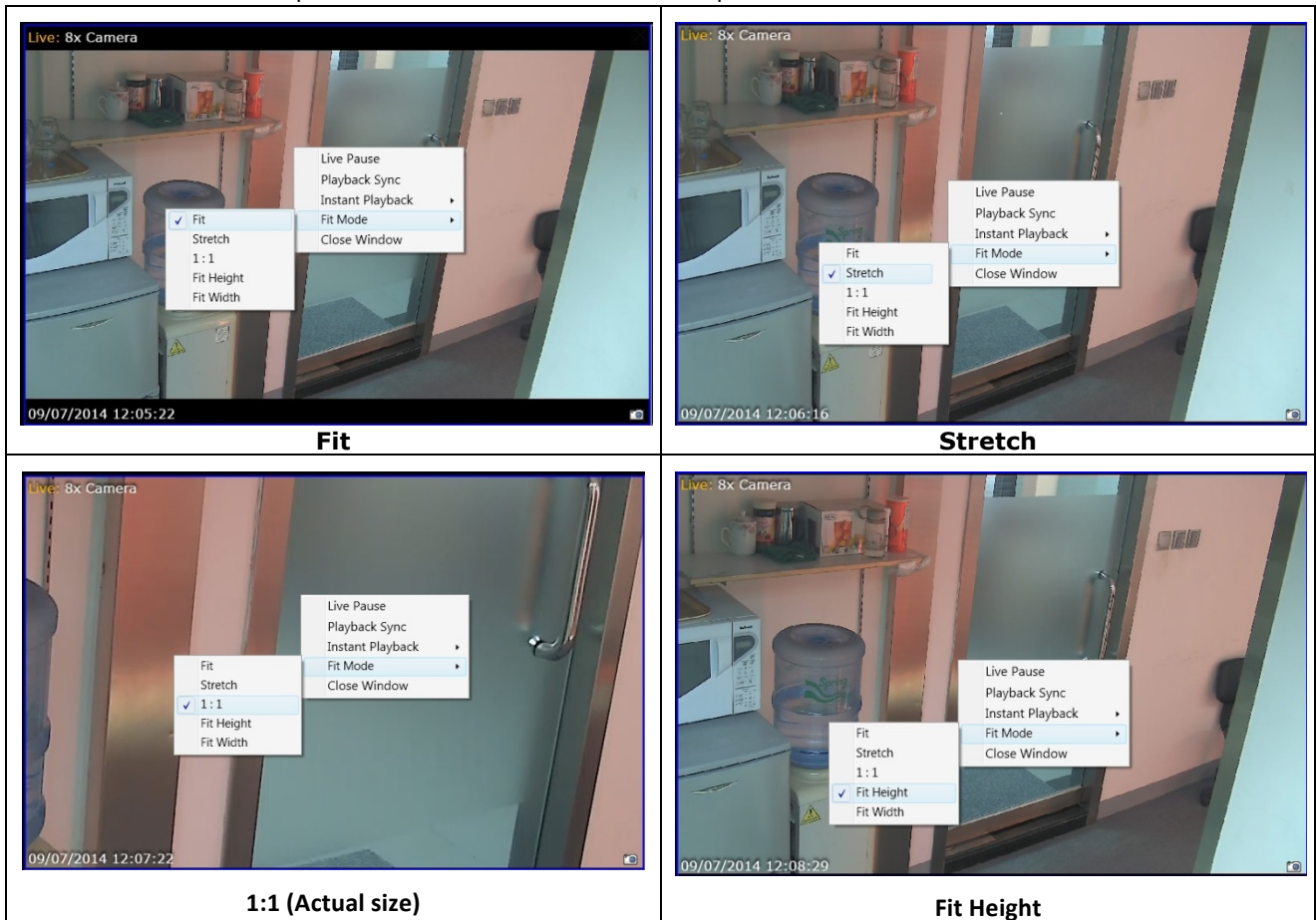


Figure 47: Camera Workspace

- (b) To call up the saved Camera Workspace, user can simply double-click on the item from the Camera Workspace list.

6.7. Fit Mode

- (a) To change the aspect ratio of the video in the current viewing tile:
- Right-click on the video and select “Fit ode”
 - Use drop-down menu to choose the desired aspect ratio



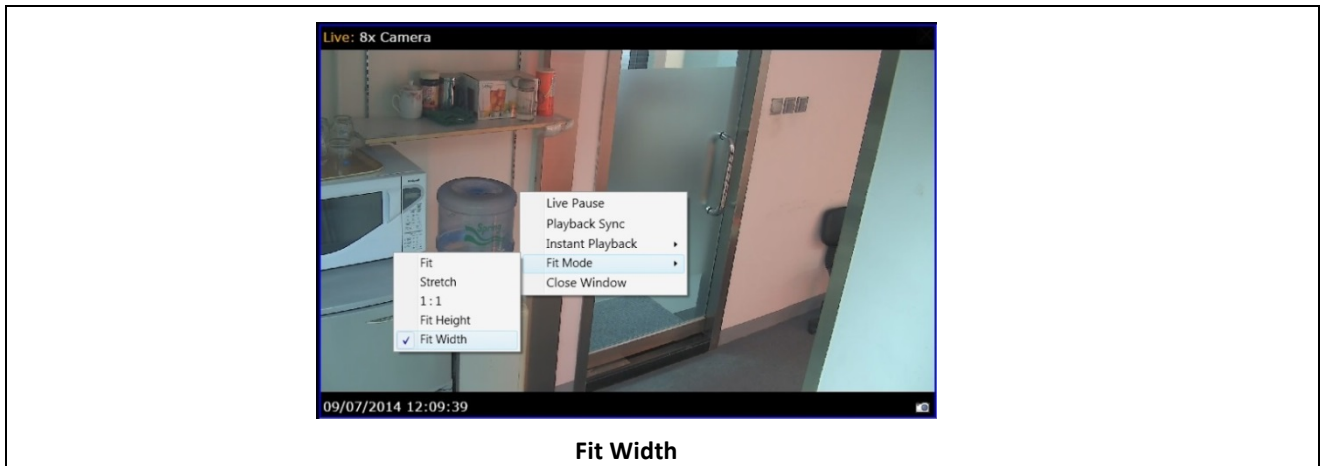
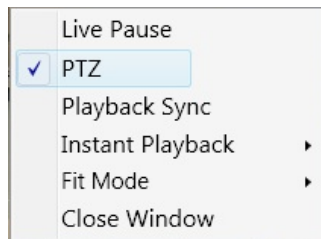


Figure 48: Fit Mode

6.8. PTZ Control

- (a) To do Pan/Tilt/Zoom control,
 - i. Select a PTZ camera
 - ii. Right click on the video widow of selected PTZ camera
 - iii. Select "PTZ"



- iv. PTZ overlay will appear

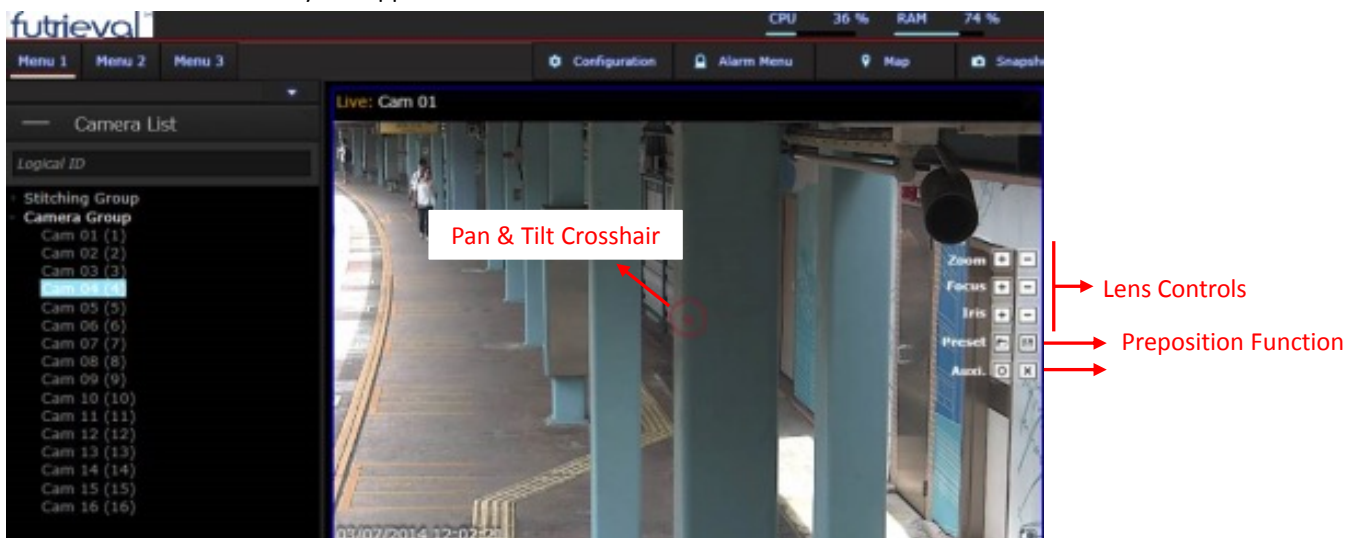


Figure 49: PTZ Control Overlay

- v. Use Centre Crosshair to do pan and tilt controls



- vi. Use right-side menu for Lens, Prepositions and Auxiliary functions

6.9. Sequence

- (b) To run a sequence,
 - i. Select any video window
 - ii. Double-click any sequence item from the Sequence Menu list

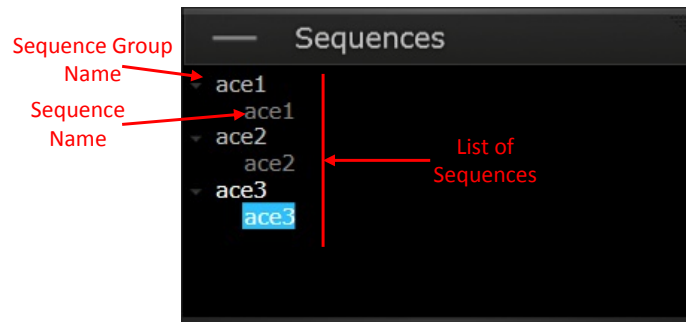


Figure 50: Sequence Menu

- iii. The selected Sequence will run automatically:

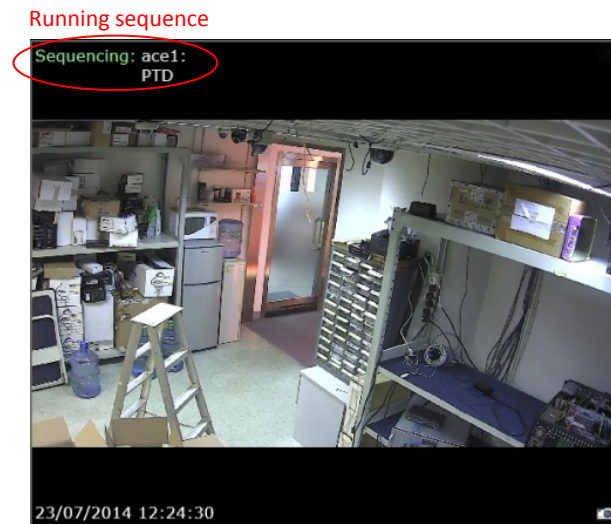


Figure 51: Running Sequence

- (c) Sequence configuration is to be done in CC.

7. Playback

7.1. Custom Playback

- (a) To playback video files pre-recorded by NVR, a file search process must be undertaken as follows:
- Select your desired video window for playback operation
 - Select the interested camera from the tree list by double-clicking or dragging your desired camera to any of the video displaying windows
 - Select "Start & End time" in the Playback Menu

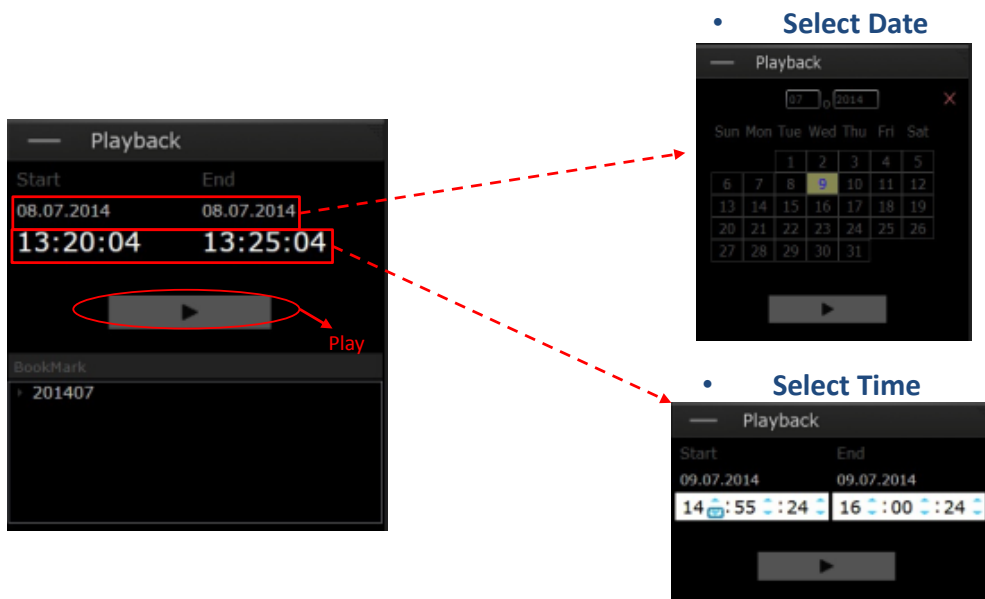


Figure 52: Date & Time Selection for Playback

- Press "Play" button to play the specified time period the current selected camera:

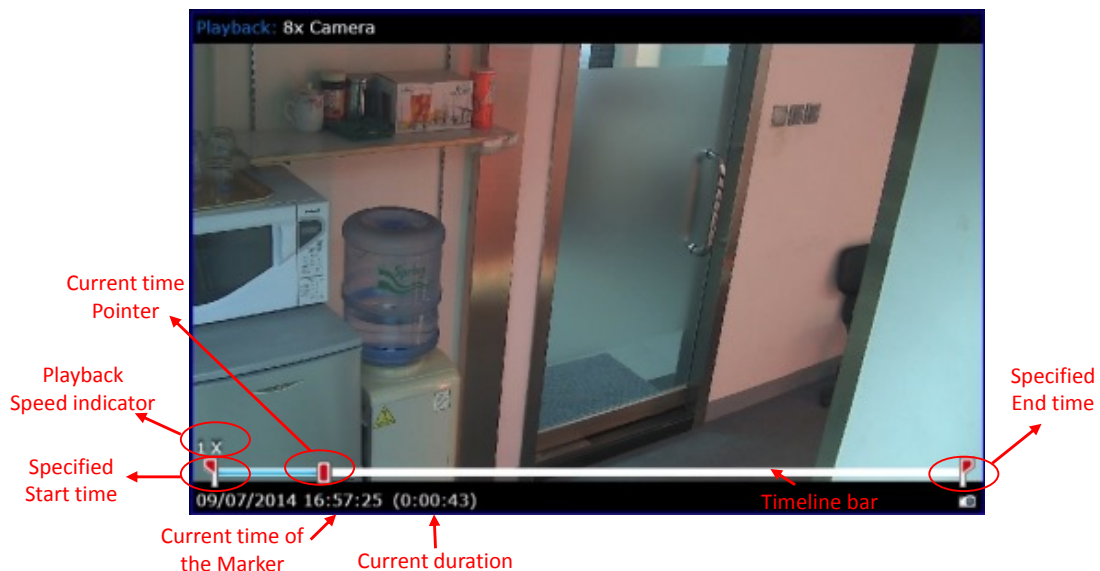


Figure 53: Playback Time Bar

- User can move the Pointer to the desired time of the playback time bar.
- User can move the Start time & End time Markers to specify the playback period.

- (d) When mouse over on the playback video, the Playback Control Buttons will appear:

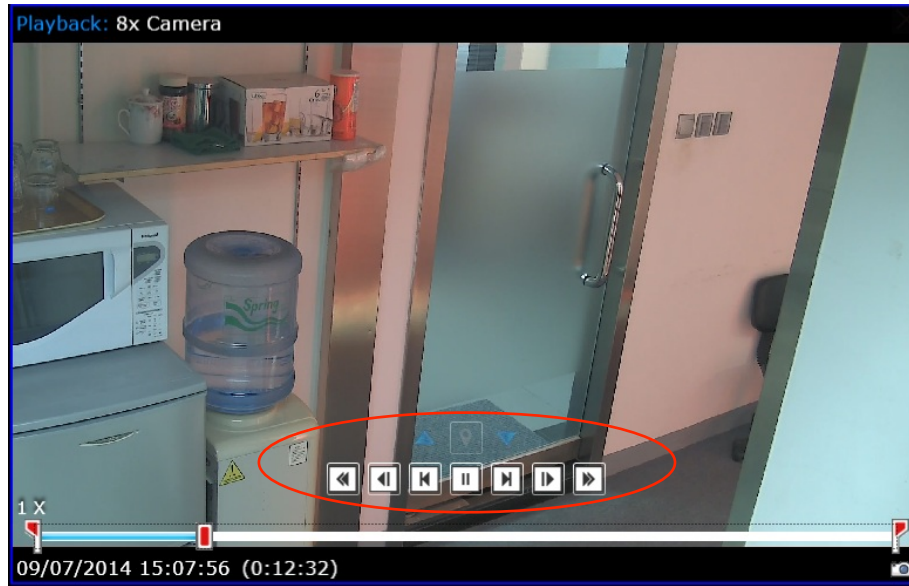


Figure 54: Playback Control Buttons

- (e) The descriptions of Playback Control Buttons are shown in the following table:

Button	Description	Details
Playback Navigation controls		
	Fast Backward	To rewind the footage in different speed: e.g. from X2, X4, X8, X16, X32, X64, X128, X1024
	Slow Motion Backward	To rewind the footage in slow motion: e.g. $\times \frac{1}{2}$, $\times \frac{1}{4}$, $\times \frac{1}{8}$, $\frac{1}{16}$
	Frame by Frame Backward	To rewind the footage frame-by-frame
	Pause	To pause the footage while it is playing
	Play	To play the footage while is paused
	Frame by Frame Forward	To play the footage frame-by-frame
	Slow Motion Forward	To play the footage in slow motion e.g. $\times \frac{1}{2}$, $\times \frac{1}{4}$, $\times \frac{1}{8}$, $\frac{1}{16}$
	Fast Forward	To play the footage in different speed e.g. from X2, X4, X8, X16, X32, X64, X128, X1024
Bookmark Buttons		
	Previous Bookmark	
	Place Bookmark	
	Next Bookmark	

7.2. Instant Playback

- (a) Quick Playback allows user to conveniently select a preset time interval (1mins, 3mins, 5mins, 10mins, 15 mins, 30 mins and instant reverse) for video footage playback without specifying custom time periods.
- (b) To call up Instant Playback,
 - i. Right-mouse click on any live video of the selected camera and select "Instant Playback"

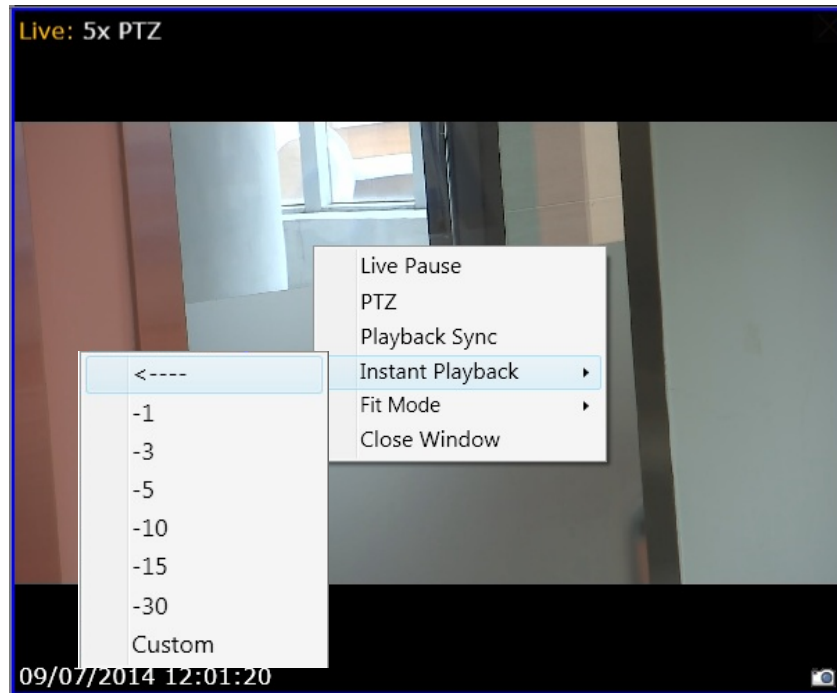


Figure 55: Instant Playback

- ii. Click on the desired playback duration from the drop-down menu
 - iii. The playback video will start instantly.
- (c) Custom option will use the time specified in the Playback Menu
- (d) <---- will start instant reverse playback

7.3. Sync Playback

- (a) The Sync Playback allows users to synchronously play more than one camera footage on different windows.
- (b) To start Sync Playback for a number of camera recorded footages,
 - i. Right-mouse click on any desired video windows and select "Playback Sync"
 - ii. Start playback on the desired video window as a reference
 - iii. Other video display window(s) within the "Playback Sync" group shall thus be synchronized together when operating the Reference Playback window controls e.g., fast forward/backward etc.

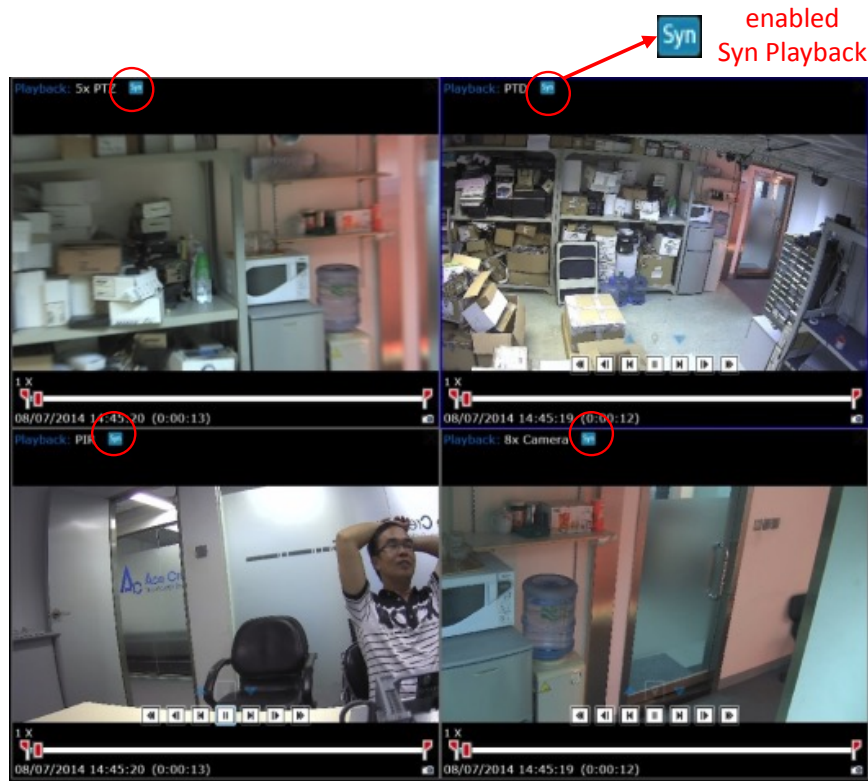


Figure 56: Synchronous Playback

7.4. Dynamic Playback

- (a) When the Current Time Pointer reaches at the end of the specified playback period, it will then be extended to another ½ hour automatically.

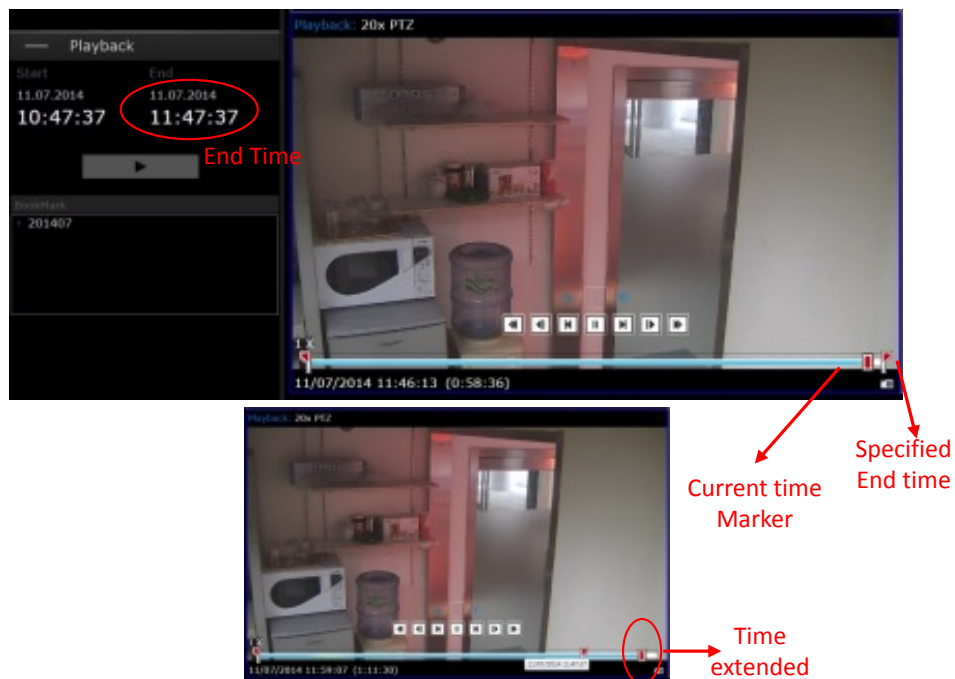


Figure 57: Dynamic Playback

7.5. Continuous Playback

- (a) While playing camera footage, user can drag another camera to the playback window. Another camera being dragged will play instantly and continue from the point of the previous footage.

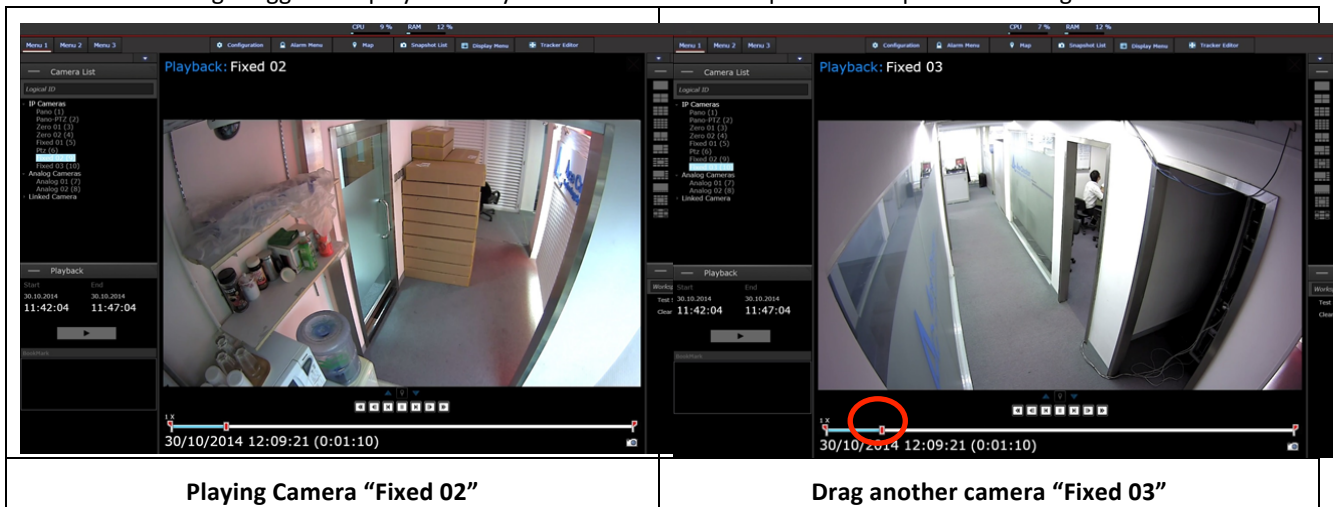


Figure 58: Continuous Playback

7.6. Investigation Playback

- (a) If Investigation Mode in RS Configuration is enabled, an extra button "Start Investigation Playback" will be shown in the Playback Menu.

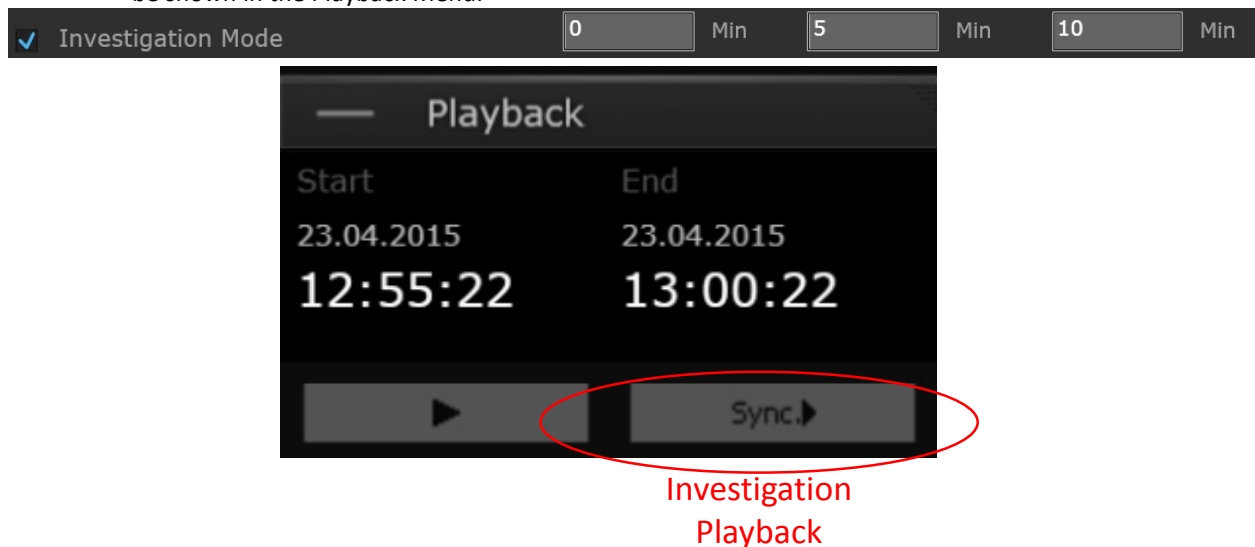


Figure 59: Investigation Playback Button

- (b) The Investigation playback will follow the settings of Investigation Mode configured in the RS Configuration.

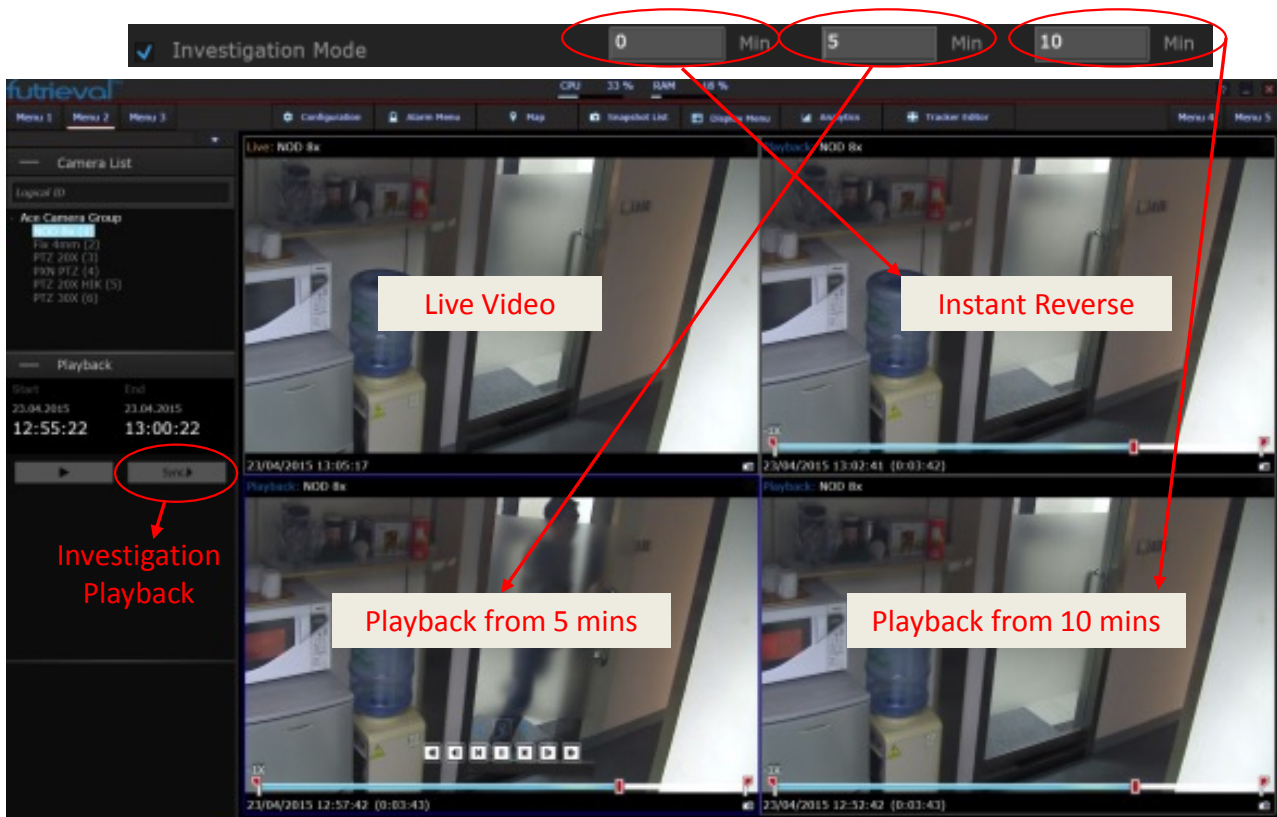


Figure 60: Investigation Playback

7.7. Indication of Missing Footage

- (a) User can right mouse click on the date of the Playback Menu to check the status for the integrity of recording footages on each day.

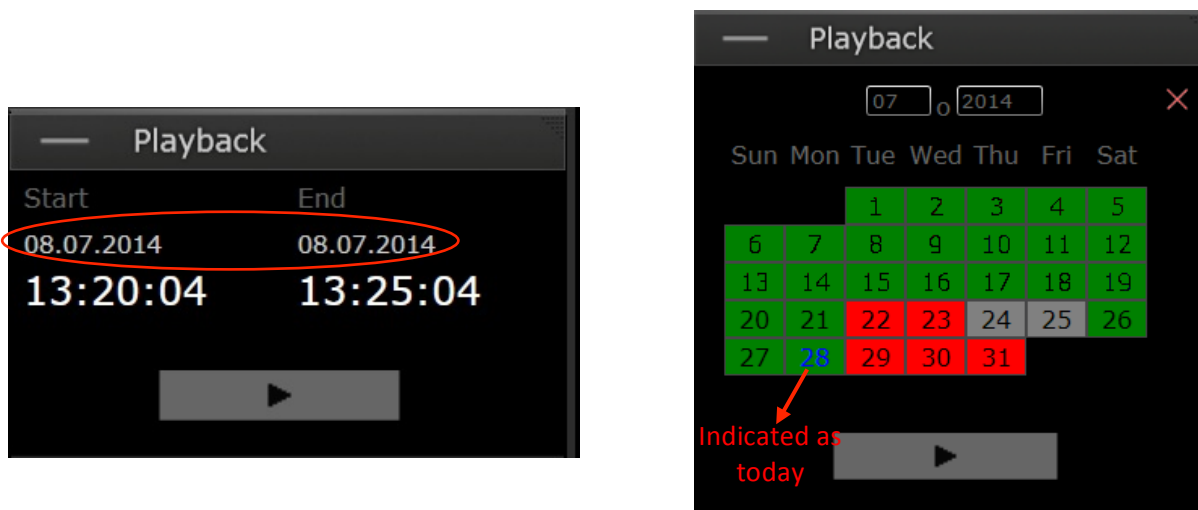


Figure 61: Checking Footage Integrity

Colour	Description
	<u>No missing footage</u>
	<u>No recording</u>
	<u>Missing footage</u>

- (b) User can mouse over on the day in Grey colour to show up a list of missing period(s).

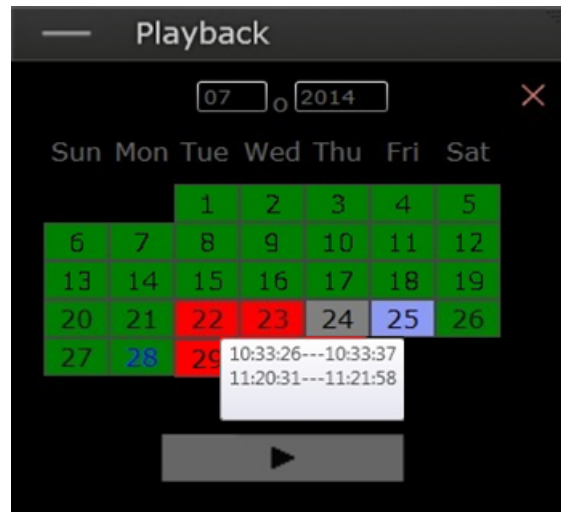


Figure 62: Indication of list of Missing Periods

- (c) During playback, the missing footage of the requested playback period will be indicated in red.

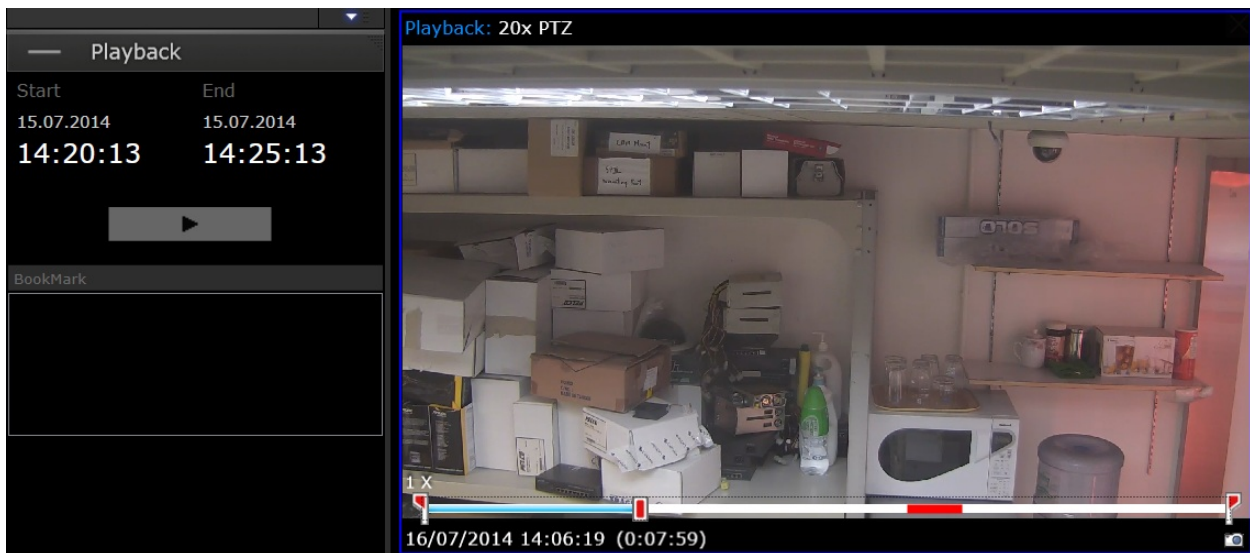


Figure 63: Indication of Missing Period in the Playback Time Bar

8. Cropping Video Display(s)

8.1. Cropping Video Display

- (a) RS machine equipped with dual monitor or more than 2 monitors allows user to crop any video displaying from the main GUI to the secondary monitor(s).

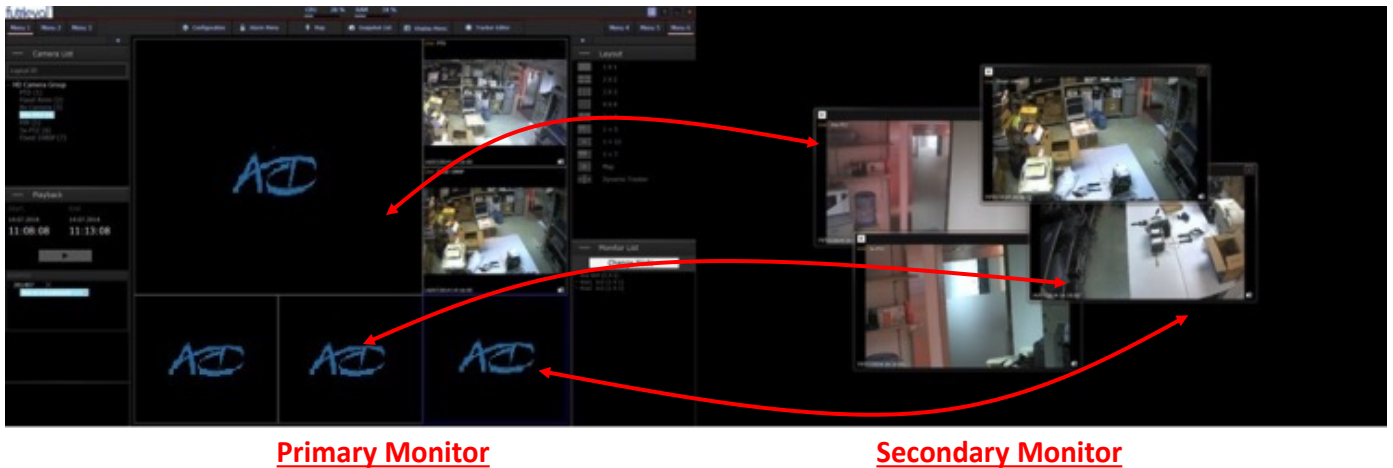


Figure 64: Cropping Video Display

- (b) To crop video,
- i. Hold left mouse click on the desired video window and move to the secondary monitor to crop the selected video image out.
 - ii. User may repeat the cropping action up to a maximum of 16 videos

8.2. Rearranging Cropped Videos

- (a) Once user has cropped the required videos out to the secondary monitor, he or she can click on the “Re-arrange” button which is located at the top right hand corner of the main GUI to show the video images in full screen on the secondary monitor.
- i. Once the desired videos have been cropped to the secondary, click on “Re-arrange” button



Figure 65: Rearranging Cropped Videos

- ii. The cropped videos will then be re-arranged in full screen on the secondary monitor based on the number of cropped videos, i.e. 4 cropped videos will be arranged in 2x2 and 9 cropped videos will be arranged in 3x3 etc.



Primary Monitor

Secondary Monitor

Figure 66: Rearranging Cropped Videos

- iii. Click the Re-arrange button again to toggle

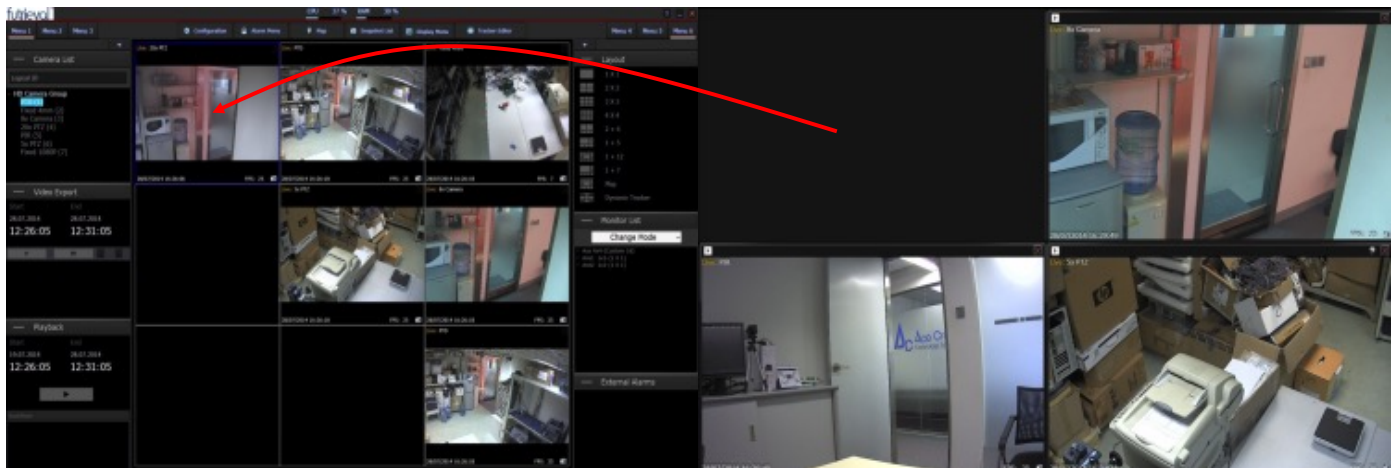
8.3. Close a Cropped Video

- (a) User can click "X" to close the video as shown in Figure 67 and resume the video back to the original position of the video window in Primary monitor as show in Figure 68.



Secondary Monitor

Figure 67: Closing a Cropped Video (1)



Primary Monitor

Secondary Monitor

Figure 68: Closing a Cropped Video (2)

8.4. Other Operations on the Cropped Video

(a) User is able to perform the following actions on any cropped videos:

- i. Playback (Refer to section 7 for details)
- ii. Snapshot (Refer to section 10.1 for details)
- iii. Creating Bookmark (Refer to section 10.2 for details)

iv. Popup Menu

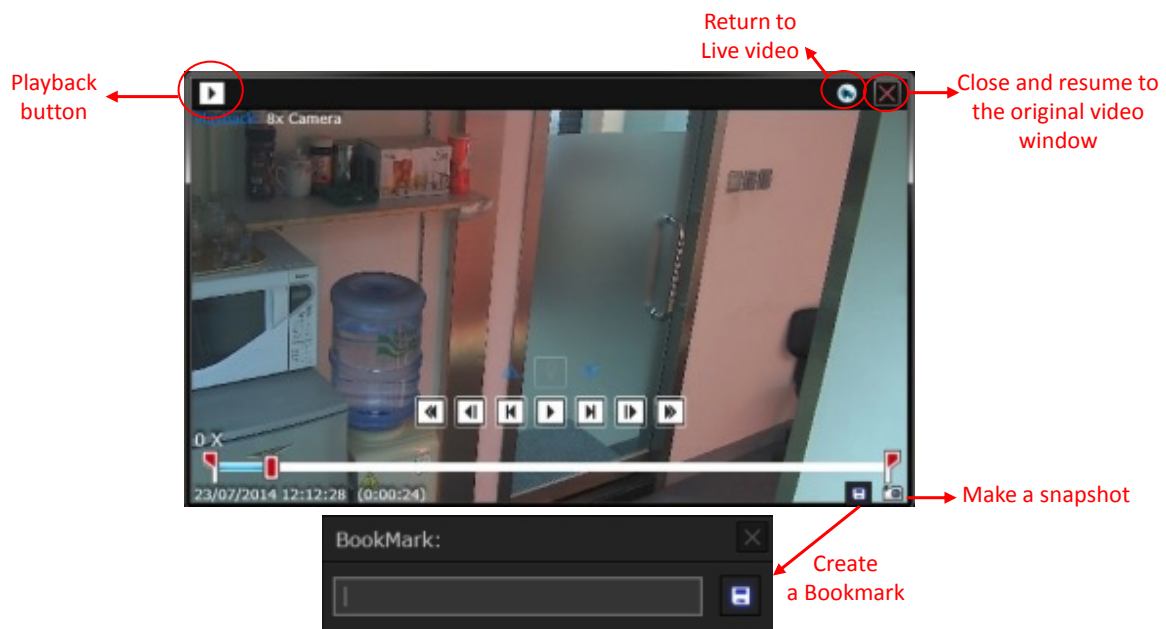


Figure 69: Operation on the Cropped Video

9. Multi-View Digital Presets

9.1. Digital Zoom

- (b) User can enable Digital Zoom of live or playback image by using right-mouse to draw a box (which would appear in blue around the area that he or she is interested in).
- (c) To un-zoom, simply click on **Ctrl** key on the keyboard to resume to normal view.



Figure 70: Digital Zoom

9.2. Smart Digital Preset

- (a) Smart Digital Preset (DP) provides user for multi-view capability with single camera stream for both live and playback.
- (b) It allows user to create basically unlimited views and Regional-of-Interests (ROI's) out of the single camera. Each of the ROI's is able to run at 25fps utilizing only one camera bandwidth.
- (c) To do Smart Digital Preset (DP),
 - i. Use right-mouse to do a live digital zoom on the desired camera as described in section 9.1

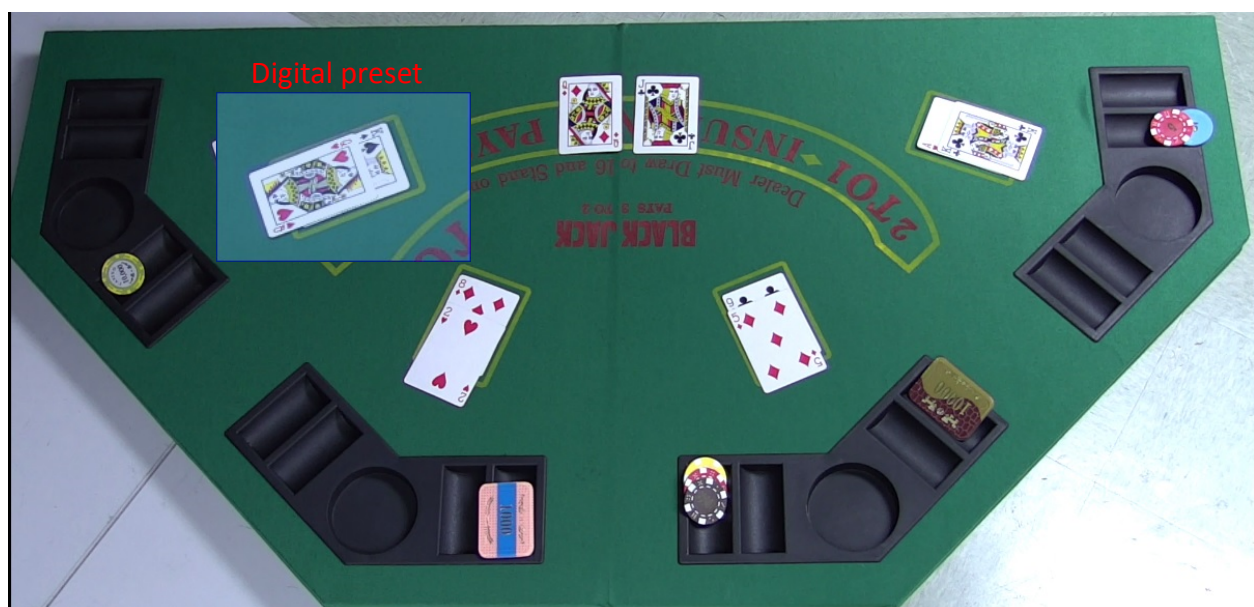
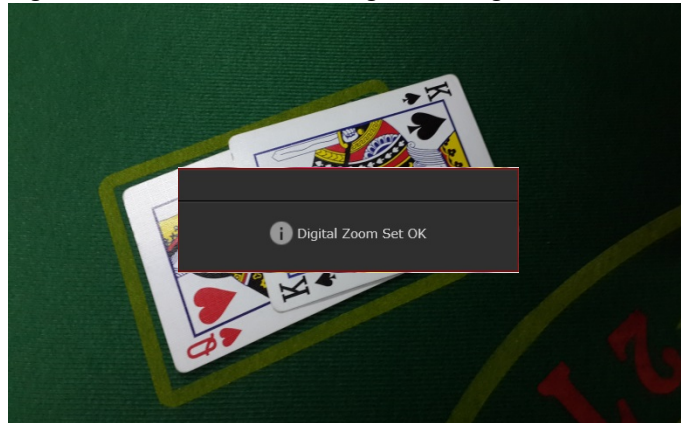


Figure 71: Creating Smart Digital Preset

- ii. Memorize the DP by pressing **Shift [num]** (e.g. Shift 1) on the keyboard

- iii. The ROI image will be shown with the dialogue box “Digital Zoom Set OK” as shown below:



- iv. User may repeat step 1 to 2 to create as many ROI images as he or she likes.
- v. After that, user can press and hold the **Ctrl** key to show all the ROI images being made as shown in Figure 72:

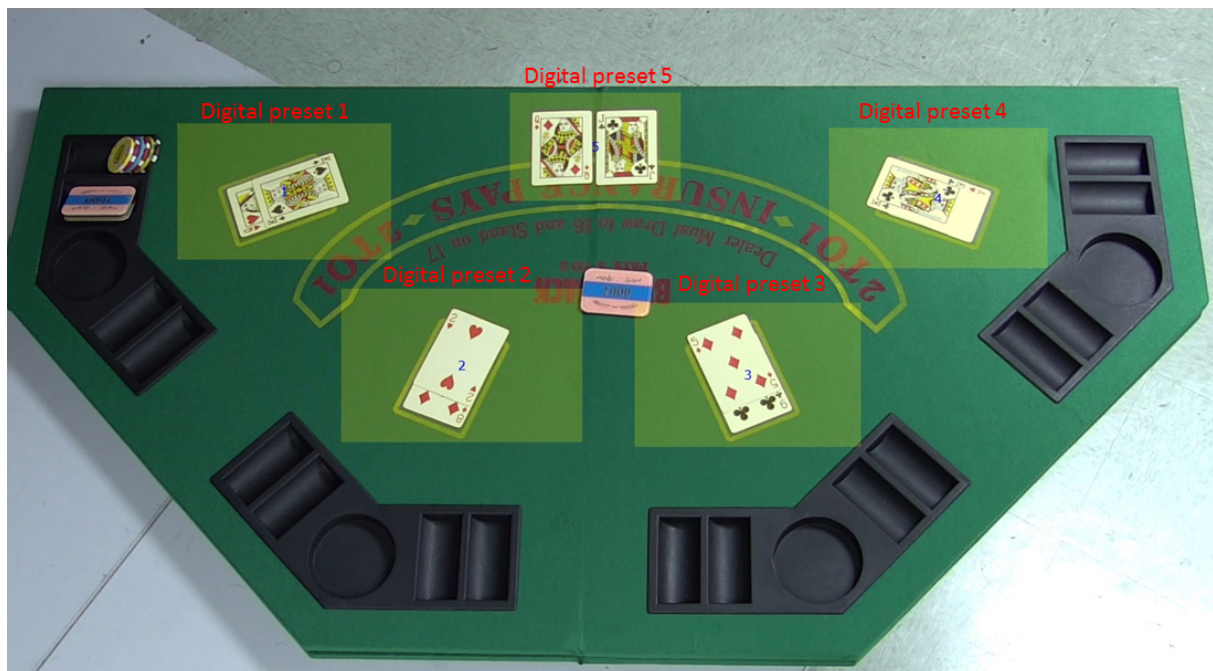


Figure 72: Smart Digital Presets with Different ROI's

- vi. To delete a DP, press **Shift+Ctrl [num]** (e.g. Ctrl+Shift 1) on the keyboard to delete DP number 1.
- vii. Press Ctrl+1, Ctrl+2 and Ctrl-3 etc. to call up the individual ROIs being memorized:



Figure 73: Zoomed Digital Presets (ROI Images)

- viii. By default, press and hold **Ctrl+Shift+F3** to call up all the ROI images with the original view according to the preset numbers :

NOTE: Display layout is being assigned automatically according to the number of DP's made.

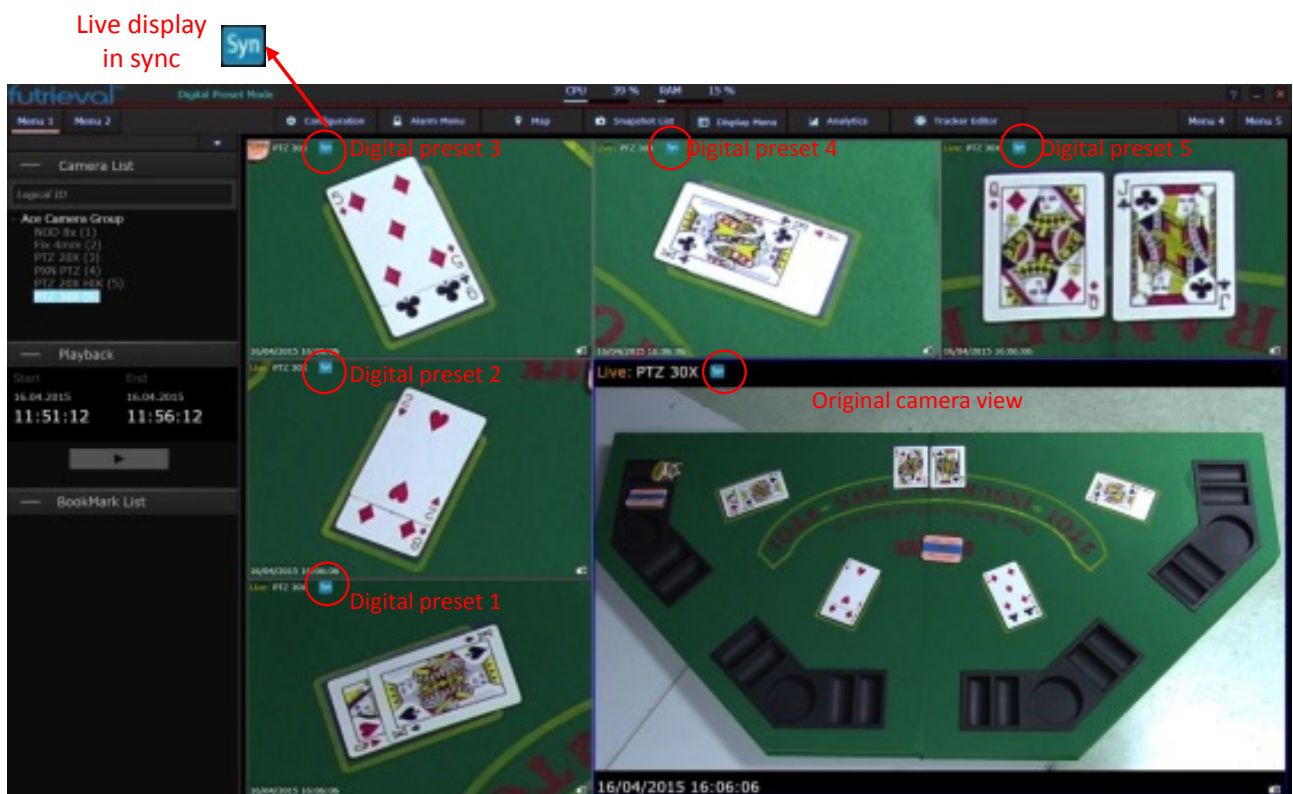
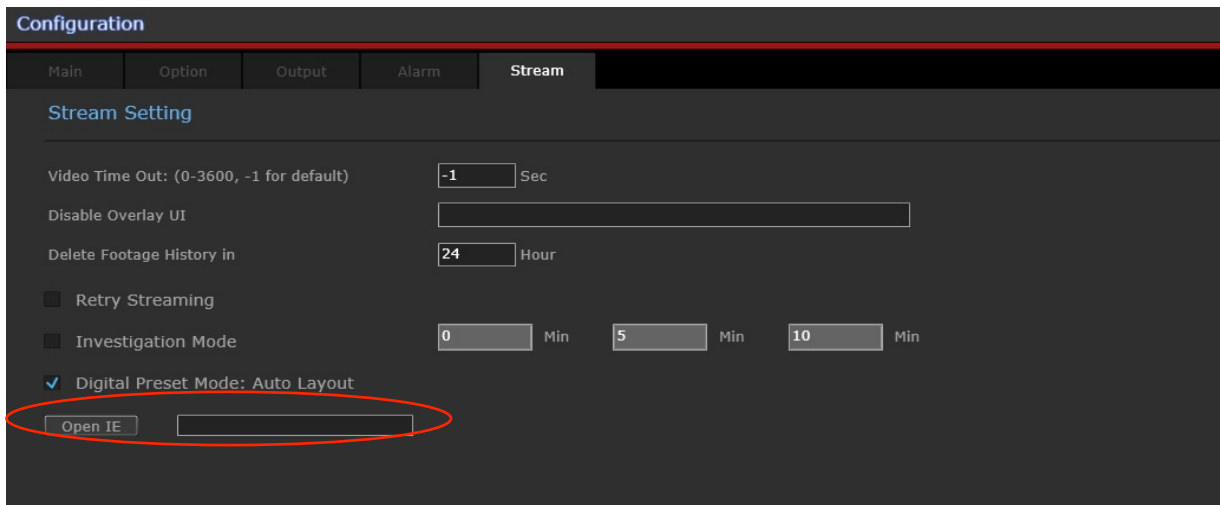


Figure 74: Display layout of Digital Presets (Default)

- ix. If **Auto Layout mode** is enabled in the RS configuration, the DP's will be arranged automatically according to the actual positions of the DP's on the original camera view.



- x. press and hold **Ctrl+Shift+F3** to call up all the ROI images with the original view according to the physical preset positions:



Figure 75: Display layout of Digital Presets (Auto Layout Mode)

9.3. Smart Digital Preset Playback

- (a) User is also able to play back all the memorized ROI images and original camera view synchronously.
- i. Simply select the original camera view and perform the playback action as usual.

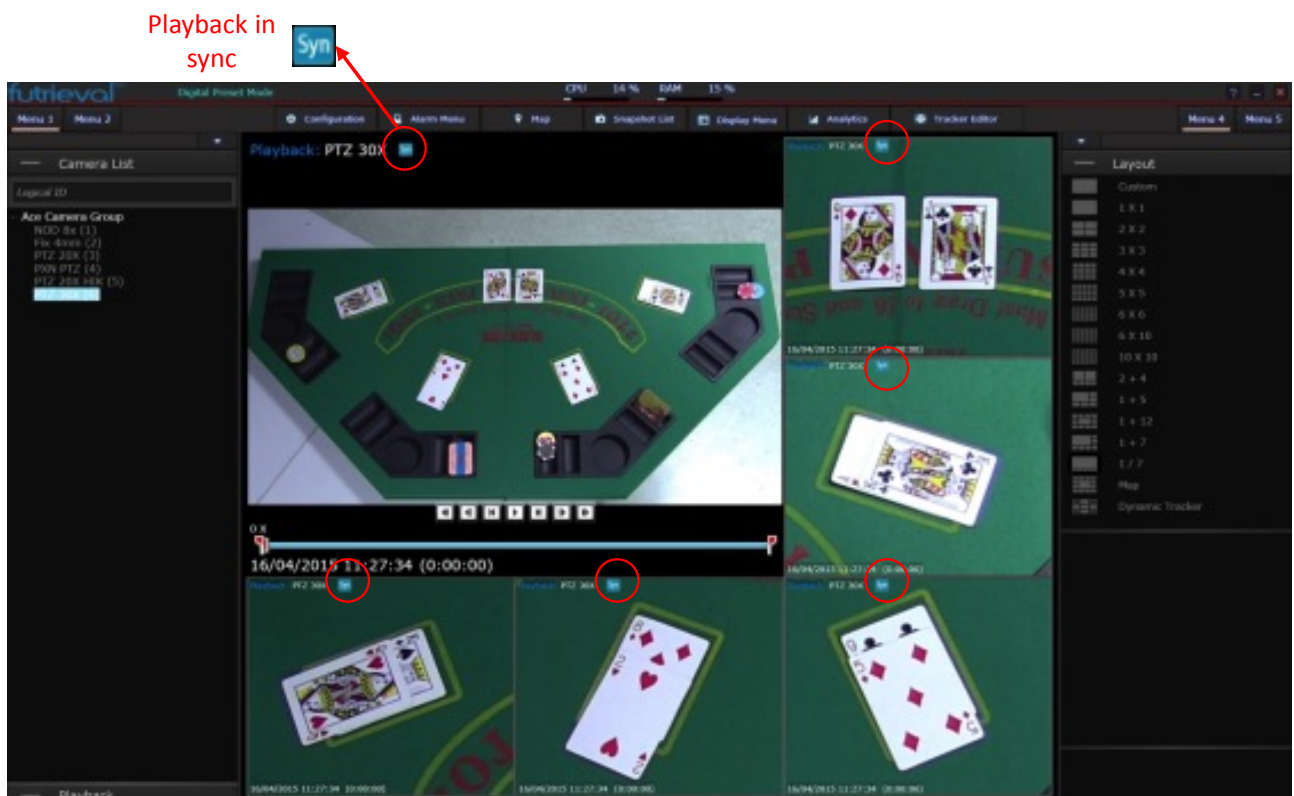


Figure 76: Digital Preset Playback

10. Snapshot, Bookmarks and Footage

10.1. Snapshot

- (a) User can capture image from any camera in both Live and Playback mode.
- (b) To do Snapshot,
 - i. Click on the Snapshot button at the bottom right hand window

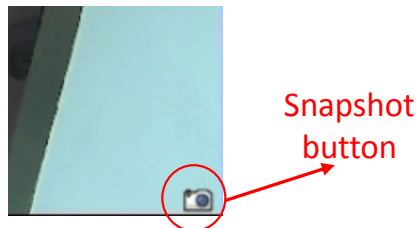


Figure 77: Snapshot Button

- ii. Input a name or use the given name and click "Save" to save the snapshot

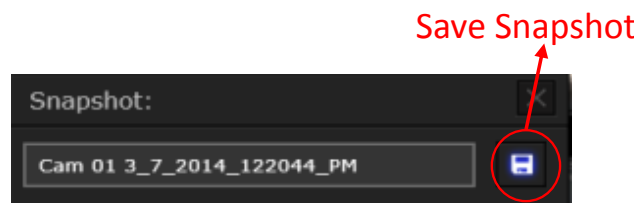


Figure 78: Save Snapshot

- iii. The snapshot saved in the **Snapshot List**:
- (c) User can review the saved snapshots in Snapshot Window by clicking **Snapshot List** from Top Menu Bar.

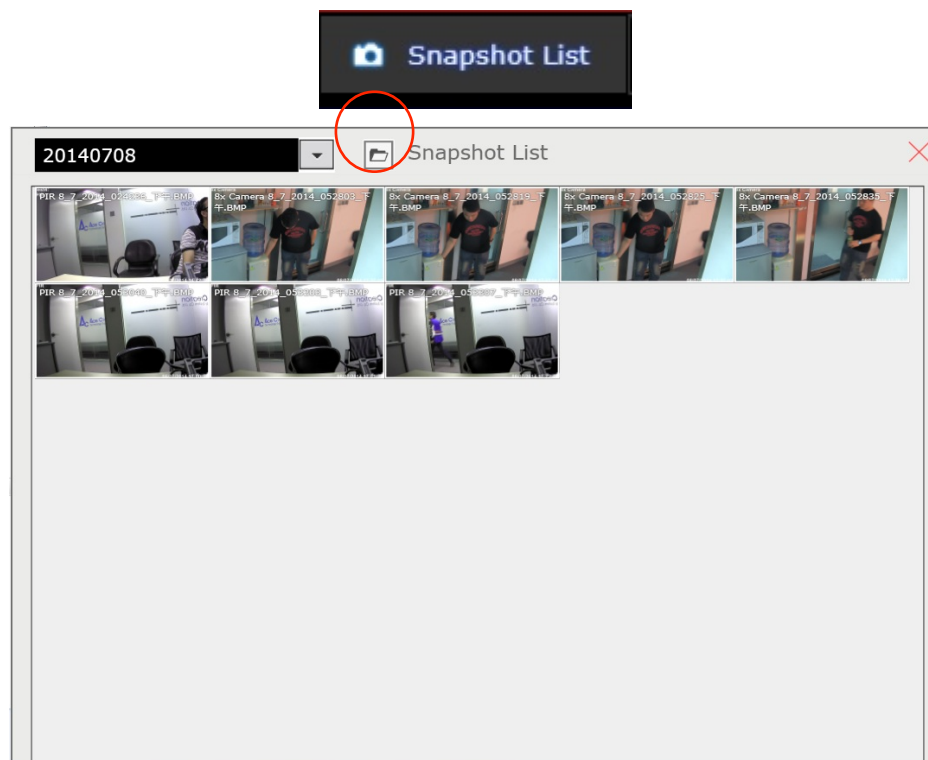


Figure 79: Snapshot Window

- (d) User can open Snapshot folder in Windows directly by clicking the following folder button:

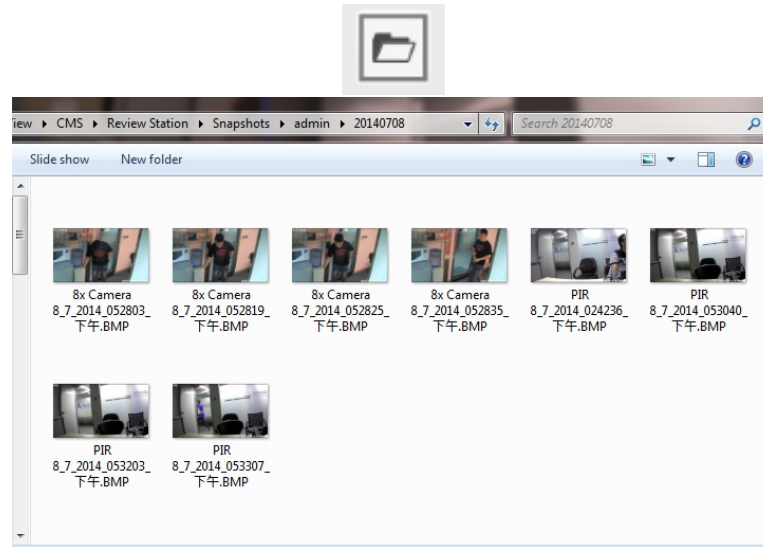


Figure 80: Snapshot Folder in Windows

- (e) User can click “X” in the Snapshot list to delete the selected snapshot or click “Print” to print the selected snapshot:

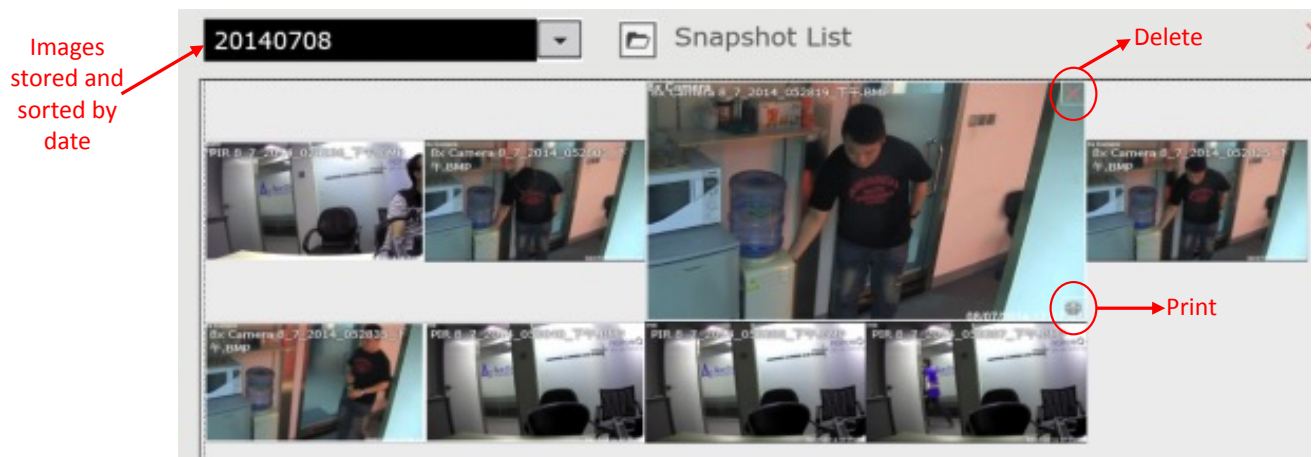


Figure 81: Deleting and Printing Snapshot

- (f) To take snapshot of zoomed objects,
- Right-mouse click and drag for digital zoom
 - Click on “Snapshot” Button



Figure 82: Taking Snapshot of Zoomed Object

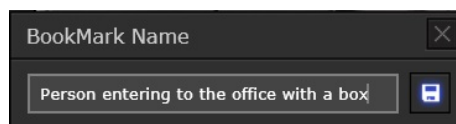
10.2. Bookmark

- (a) When user comes across any particular recorded footage while playing back, simply perform the following steps to bookmark it:
 - i. Click on “Place Bookmark” on the desired point of the playback period

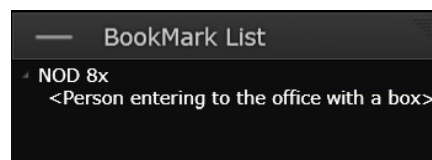


Figure 83: Place Bookmark

- ii. Input a name for the bookmark



- iii. Click “Save” to save it to the Bookmark List. The bookmark is stored under the camera name.



- iv. To delete a Bookmark, right mouse click on the particular bookmark of the time bar
- (b) User can double-click on the Bookmark item from the Bookmark List to review the incident

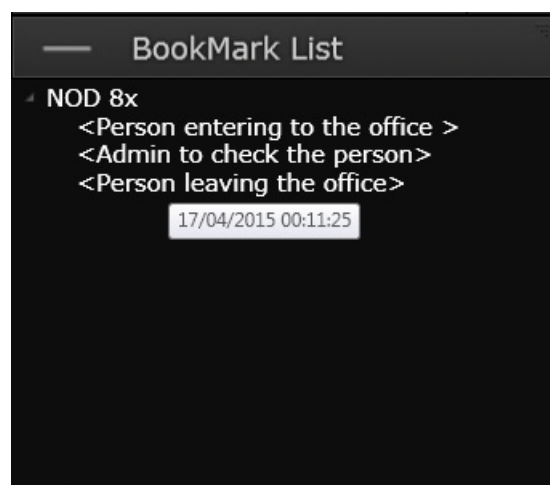


Figure 84: Bookmark List

- (c) Moving the mouse over a bookmark item the time of the selected item will be visible on the screen.
 - (d) User can use the “Previous Bookmark” and “Next Bookmark” to navigate through different created bookmarks.

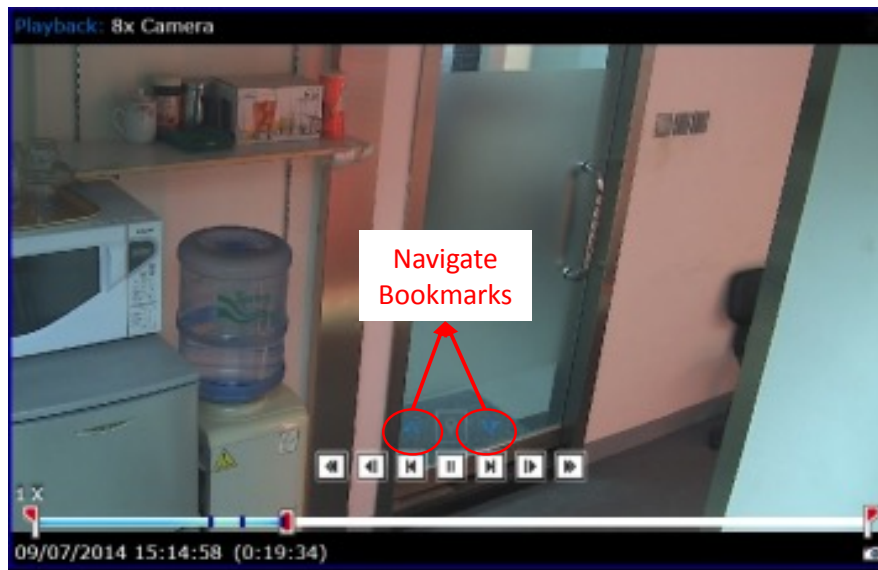


Figure 85: Navigate Bookmarks

Buttons	Description
	Previous Bookmark
	Place Bookmark
	Next Bookmark

NOTE: Bookmark will be removed after closing the playback video. User must also save “Footage” in order to save the bookmarks permanently.

10.3. Footage

- (a) To save created bookmarks permanently, user must use “Start Marker” and “End Marker” to specify the Footage period.
- (b) To save Footage,
 - i. Use Start & End time marker to specify the Footage period
 - ii. Right click on the playback video to select Footage

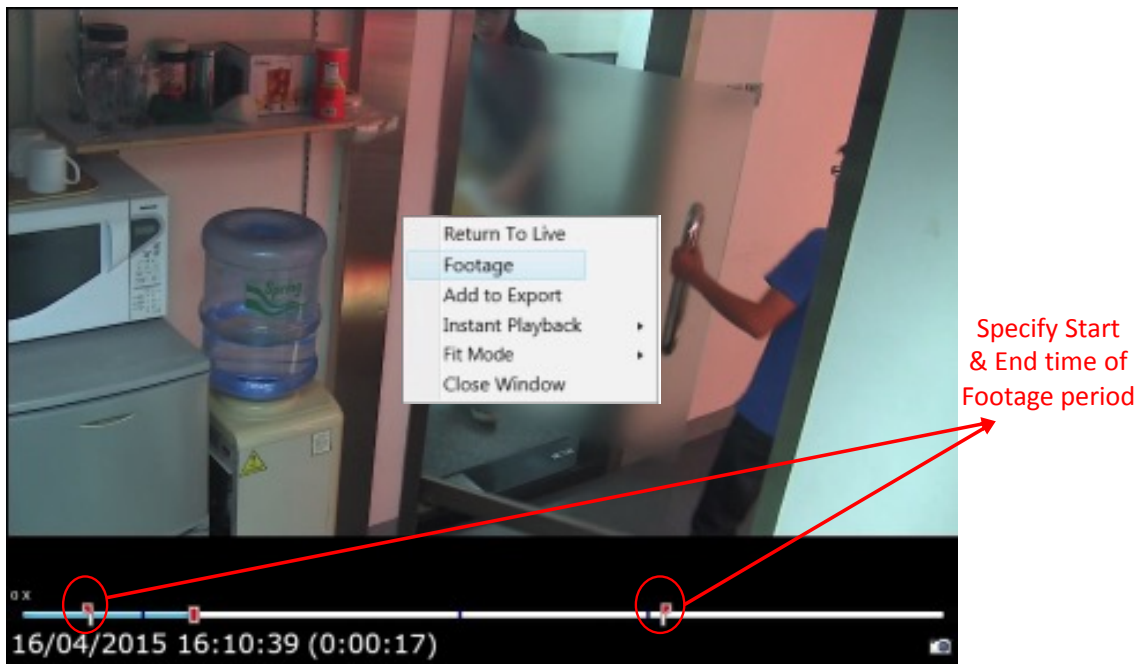
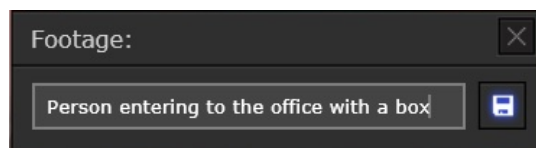


Figure 86: Specify Footage Period

- iii. Save Footage name



- iv. The footage with camera and time information will be saved together with the created Bookmarks

NOTE: Adding new bookmarks to existing footage will have to resave under the same or different name.

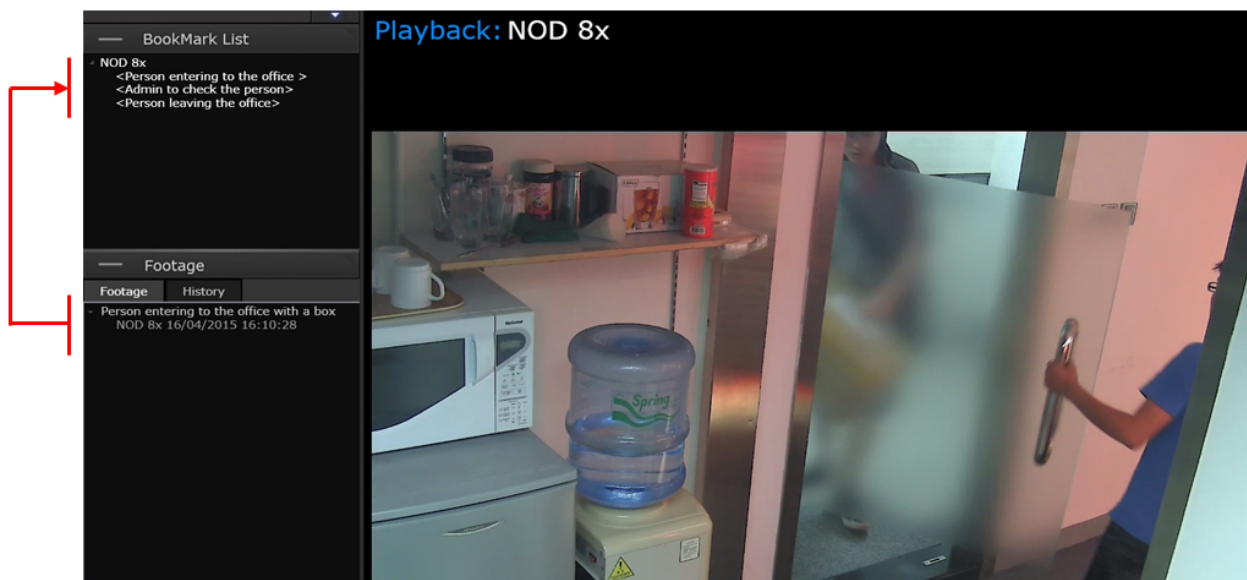
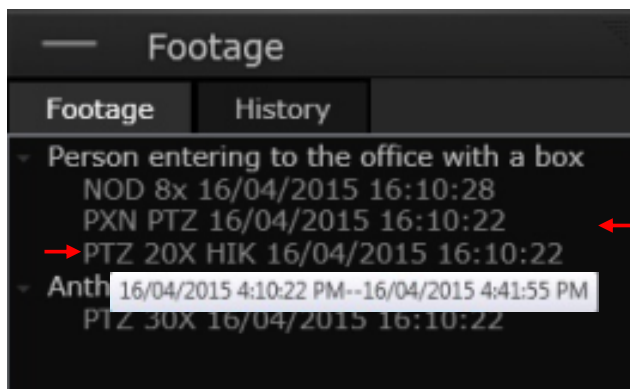


Figure 87: List of Bookmarks and Footages

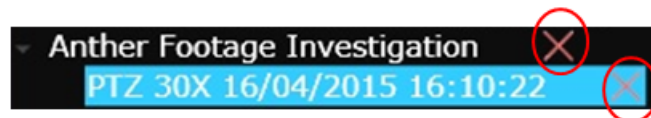
- (c) User can create another footage under the same title or different title
- (d) Moving the mouse over a Footage item the time of that selected item will be visible on the screen



Camera information and date
& time will be created
automatically

Figure 88: List of Footages with Camera, Date & Time information

- (e) Moving the mouse over a Footage item the time of that selected item will be visible on the screen
- (f) Double-click the Footage item will play back the footage indicating the previously saved bookmarks automatically.
- (g) To delete a Footage, select and click "X":



10.3.1. History

- (a) Click on the History tab of the Footage to show a list of playback history
- (b) Moving the mouse over a Footage item the time period of that selected item will be visible on the screen

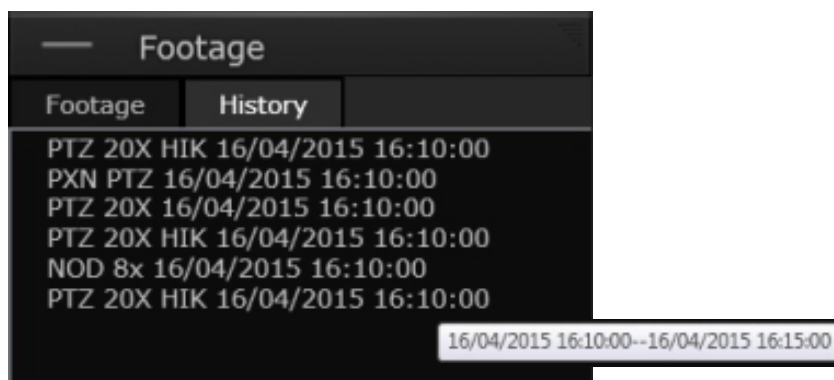
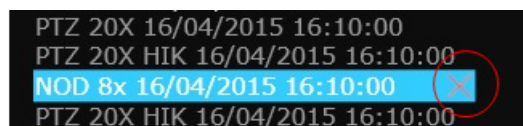


Figure 89: History List of Playback Footage

- (c) Double-clicking any item will play back the footage automatically
- (d) To delete an item, select and click "X"



- (e) By default, Footage History will be deleted in 24 hours. Changing this value in the RS configuration will extend the period.



11. Video Export

11.1. Video Export

- (a) The Video Export function allows user to export any selected camera footage
- (b) To export video(s),
 - i. Select the camera name under the Camera List
 - ii. Specify the time under the Playback Menu
 - iii. Click “Add” to add it to the Export List

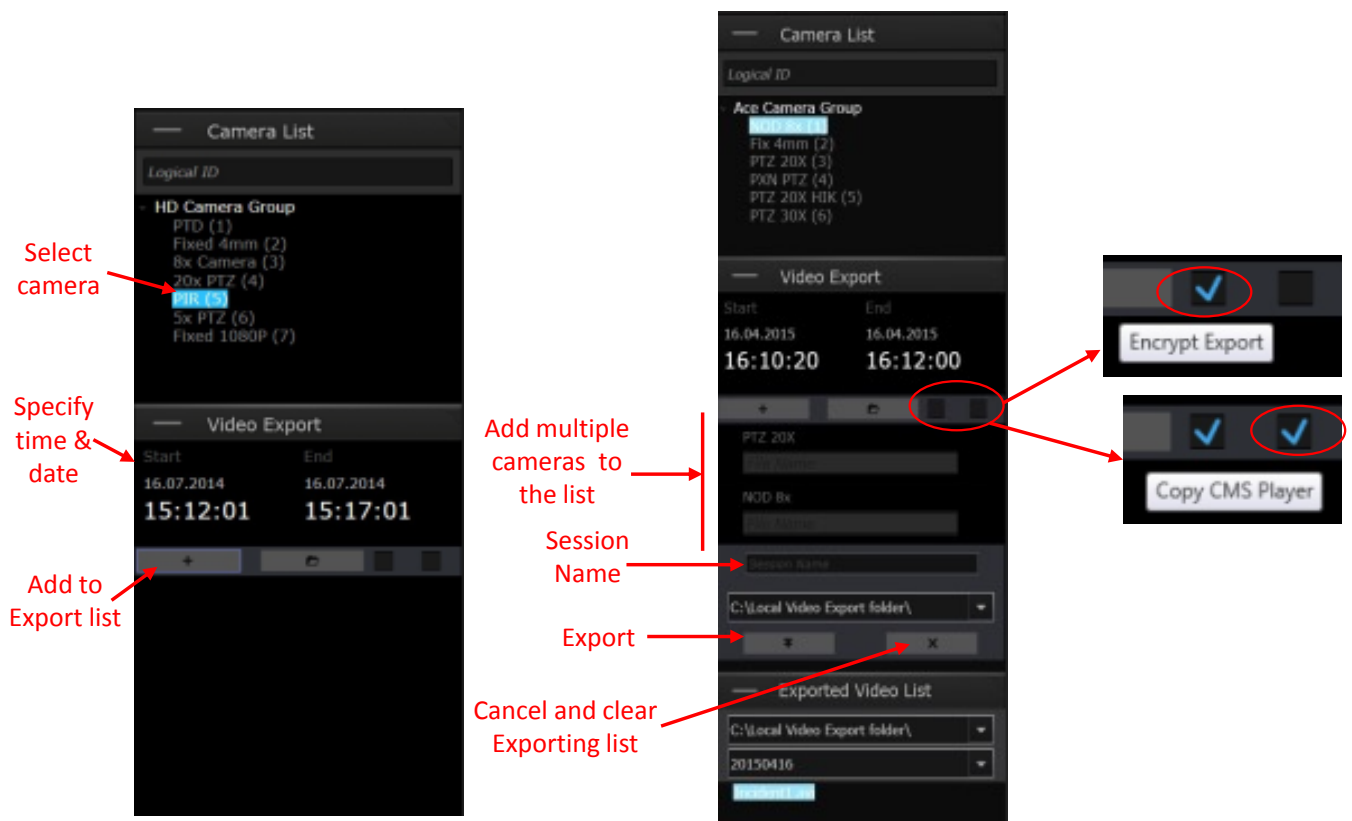
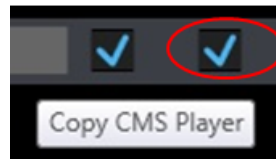


Figure 90: Adding to the Video Export (1)

- iv. Repeat step 1 to 3 to add more items to the exporting list
- v. User may rename the file name for the export item or the system will create the default file name with this format “camera name_Start Date&Time_End Date&Time” automatically
- vi. Input the Session Name which is the folder name to store the exported items
- vii. Select the export path where the export folder and files to be located
- viii. Click “Cancel” to clear the exporting list
- ix. Select “Encrypt Export” for encrypting the exported video(s) which can only be played back by Standalone CMS Player or leave it unchecked that can be played back by Windows Media Player.



- x. Select “Copy CMS Player” to include the standalone player in the exporting folder

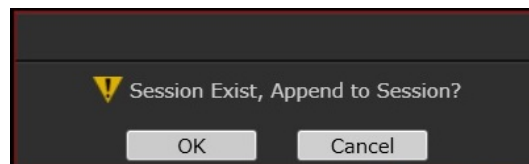


- xi. Press “Export” to start video exporting



Figure 91: Video Export in progress

- xii. If the Session Name has already existed, the alert message will prompt.



- (c) Another way to add to the Video Export list:
- During Playback, use Start & End Time Markers to specify the Export period
 - Right click and select “Add to Video Export”
 - Then, follow the same video exporting procedure as mentioned in (b) above.

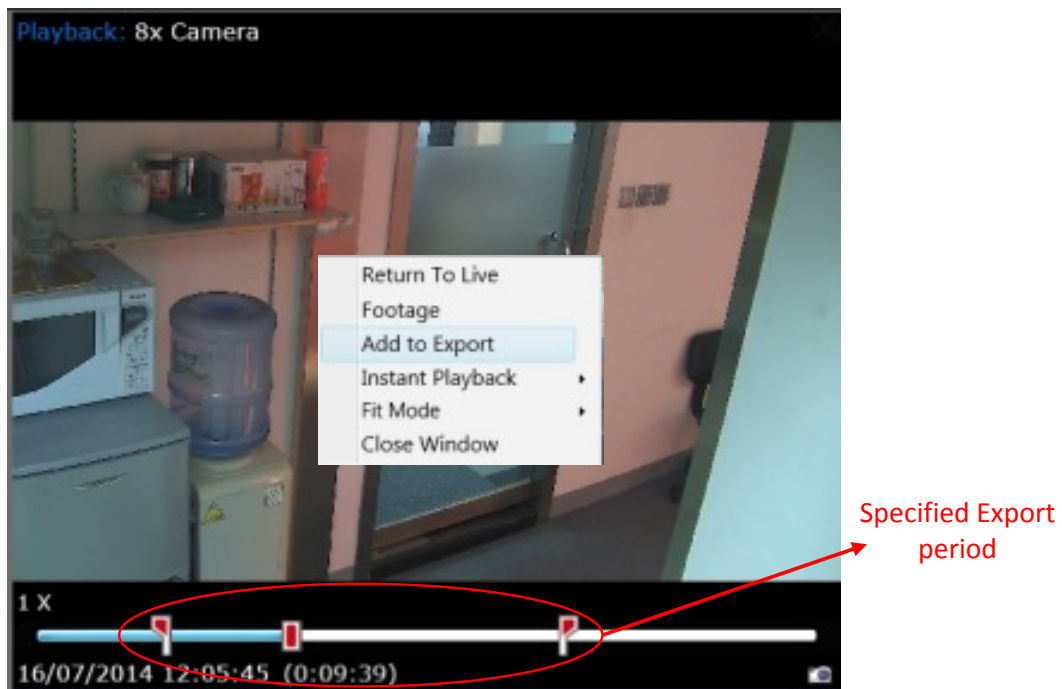


Figure 92: Specify Export period from Playback Time Bar

- (d) Click “Open Export Folder” to open the Windows folder of storing the exported footages.

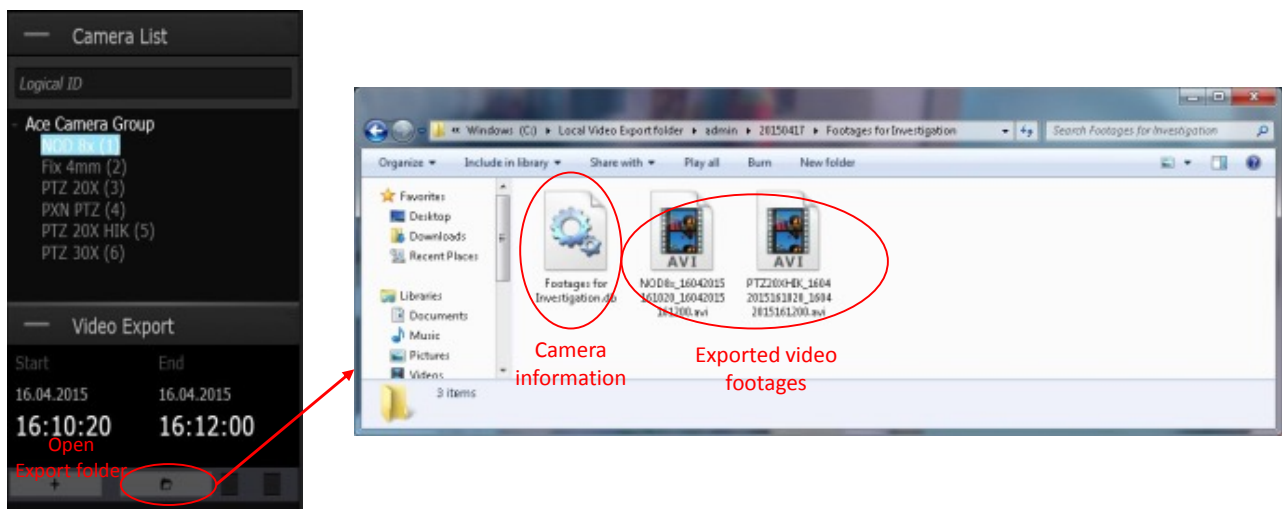


Figure 93: Open Export Folder

- (e) The Exported db file containing camera information will be used for playback by standalone CMS Player
- i. During Playback, use Start & End Time Markers to specify the Export period
 - ii. Right click and select “Add to Video Export”
- (f) Multiple exporting sessions can be done, whereby the progress will be performed one by one automatically.

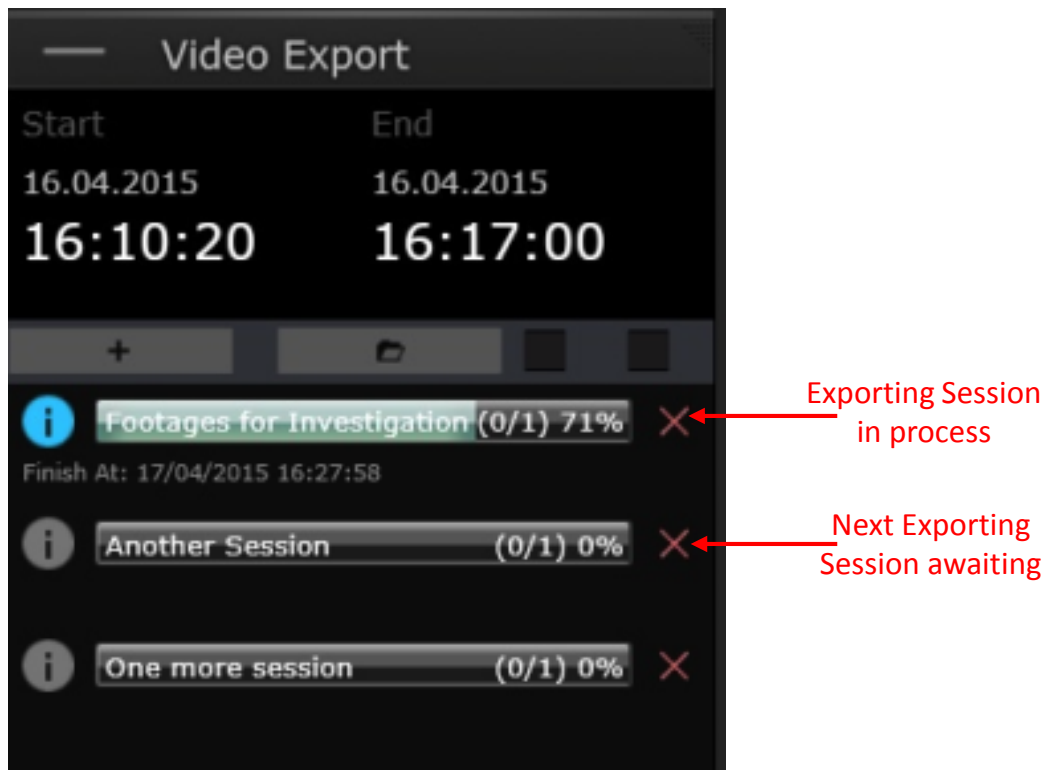
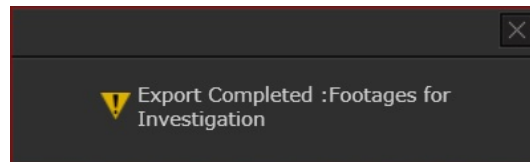


Figure 94: Multiple Exporting Sessions

- (g) Once Video Export session has been completed, notice box will pop up.



11.2. Exported Video List

- (a) The Exported camera images are stored by folder location and date in the Exported Video List:

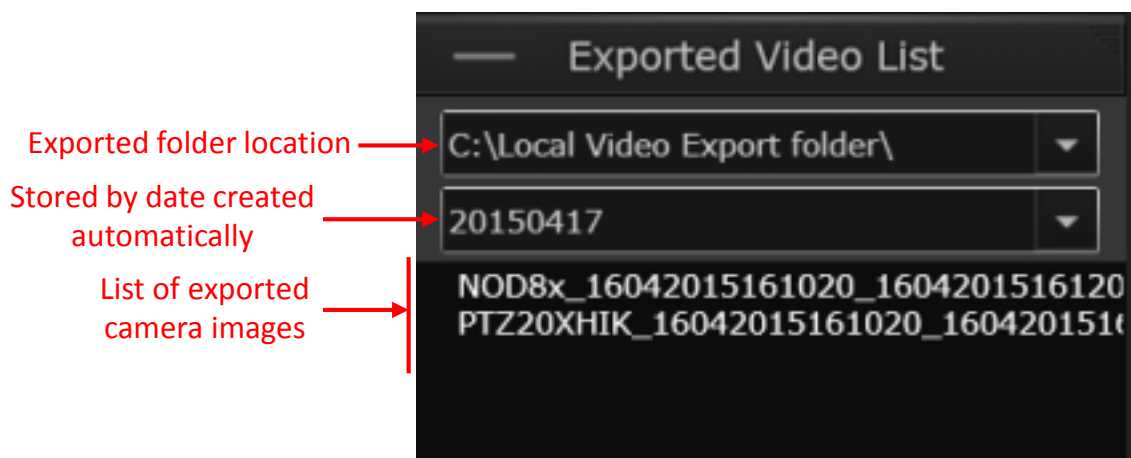


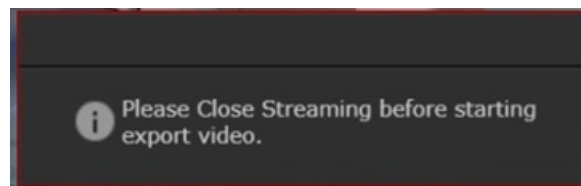
Figure 95: Exported Video List

- (b) Double-click Exported item from the Exported Video List to play the footage that is indicated as “Export Video” on top of the playback image (Figure 96).



Figure 96: Playing Export Video

- (c) Any current playback must be closed before playing back the Exported Video.



12. Controlling Decoder

12.1. Monitor List

- (a) RS is able to control multiple external monitors from decoder(s), whereby the Decoder configuration is to be done in Control Centre (CC).



Figure 97: Controlling Decoder(s) from RS

- (b) User can use Monitor List to switch to switch Live camera image to external monitor of the decoder

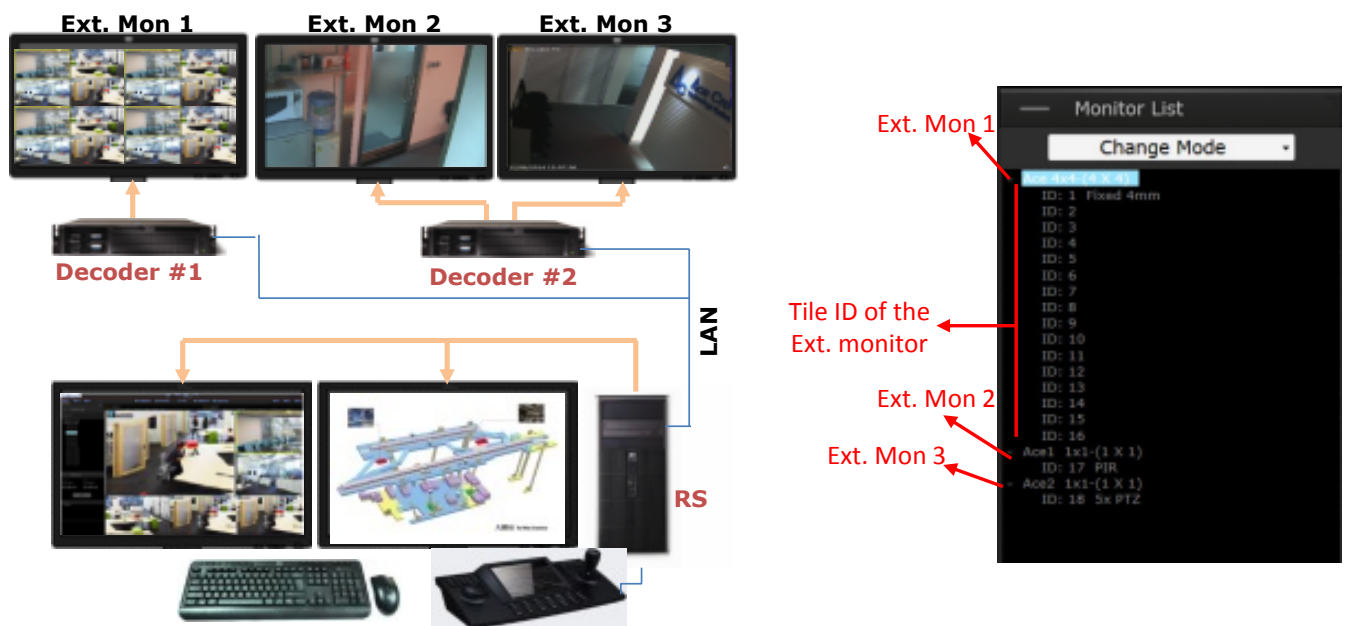


Figure 98: Monitor List

12.1.1. Switching Live Camera to External Monitor

- (a) To switch Live camera to the external monitor of decoder:
- Simply drag and drop the camera from the Camera List to any tile ID of the external monitor on the Monitor List

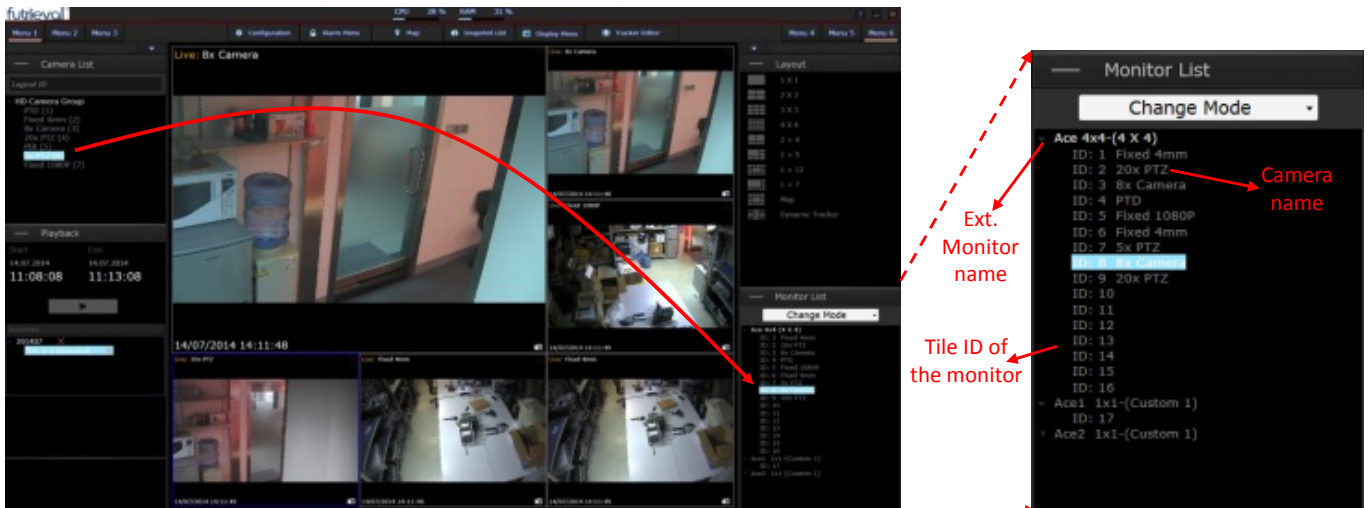
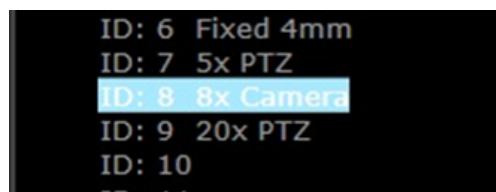


Figure 99: Switching Live Camera to the External Monitor

- The selected camera image will be displayed on the desired tile of the external monitor instantly and the camera name will be indicated on the Monitor List automatically.



- (b) User can also switch Live camera by dragging and dropping the camera to any tile of the Display Layout as shown in Figure 100.

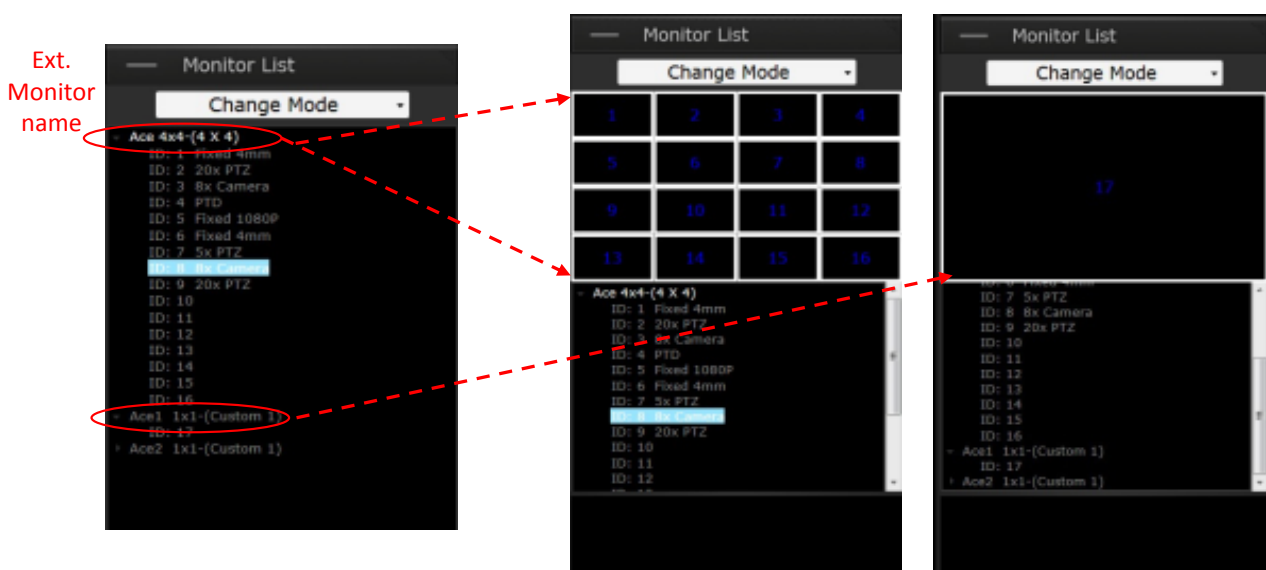


Figure 100: Switching Camera to the External Monitor via Display Layout Mode

- (c) To switch Live camera to the external monitor of decoder via Display Layout mode:

- Right-mouse click on the "Ext. Monitor Name" from the Monitor List

- ii. Drag and drop the desired camera from the Camera List to any tile of the display

12.1.2. Change of Display Layout

- (a) User can change the display layout for External Monitor.
- (b) To change the display mode,
 - i. Click on the Change Mode pull-down menu
 - ii. Select the desired display layout modes (1x1, 2x2, 2+4, 3x3, 3x4 or 4x4)



Figure 101: Change of Display Layout Mode for External Monitor

12.1.3. Playback and PTZ Controls on External Monitor

- (a) User can perform Playback and PTZ control on the external monitor of the decoder:
 - i. Double-click any tile ID of an external monitor
 - ii. The related camera image displaying of the selected tile will pop up on a separate video window on RS.

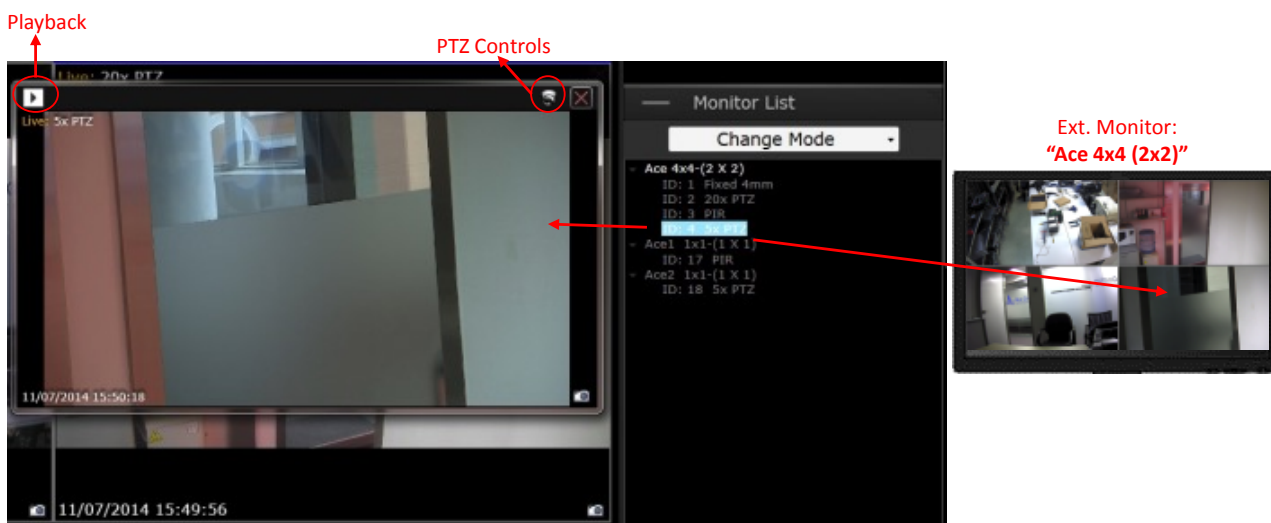


Figure 102: Playback and PTZ Control Action on External Monitor

- iii. Click “Playback” button to do playback or Click “PTZ Controls” button to do PTZ control

12.2. Monitor Workspace

12.2.1. Saving Monitor Workspace

- (a) Monitor Workspace is very similar to Camera Workspace except user changes the layout template for decoder monitors and Camera Workspace makes changes to the displaying video windows within Review Station (RS).
- (b) To create Monitor Workspace,
 - i. Drag and drop all the desired cameras to individual tiles of the external monitor
 - ii. Type in a preferred name and click “Save”

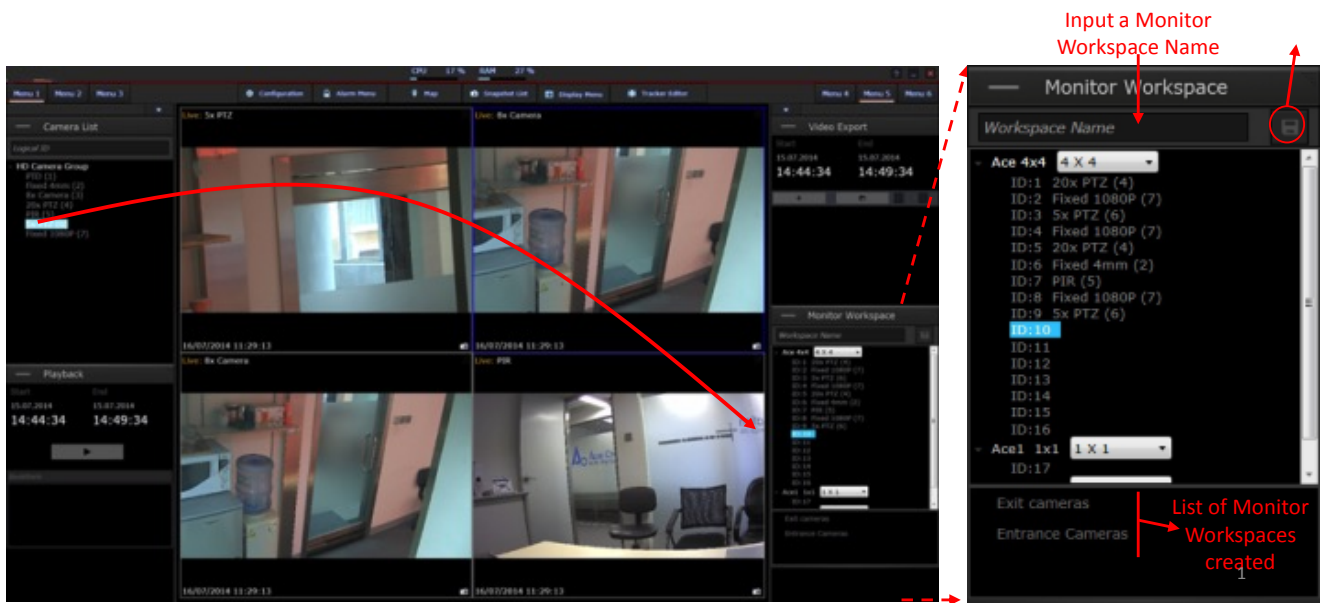


Figure 103: Creating Monitor Workspace

12.2.2. Changing Display Layout

- (a) User can change the display layout when he or she calls up a Monitor Workspace.
- (b) To change display layout of a Monitor Workspace,
 - i. Use the pull-down menu next to the “Ext. Monitor Name” to select the desired display layout mode (1x1, 2x2, 3x3, 4x4, 3x4 or 2+4) as shown in Figure 104.
 - ii. Drag and drop the camera from the Camera List to any tile ID of the external monitor on the list
 - iii. The selected camera image will be displayed on the desired tile of the external monitor instantly and the camera name will be indicated on the list automatically.

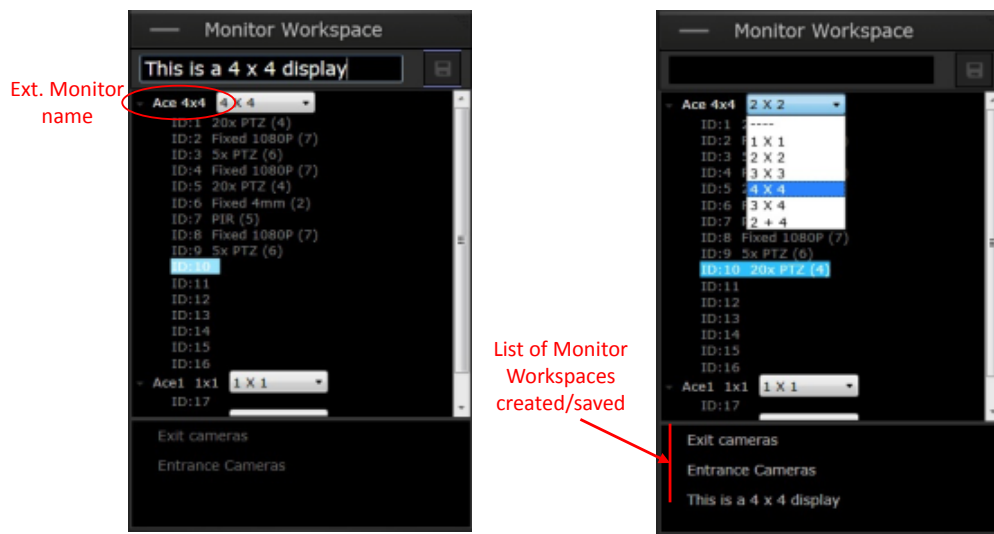


Figure 104: Monitor Workspace

12.2.3. Calling up Monitor Workspace

- (a) To call up a saved Monitor Workspace,
- Double-click the Monitor Workspace item
 - The camera images and display mode will be switched instantly on the external monitor

13. Dynamic Target Tracker (DTT)

13.1. Concept

- Dynamic Target Tracking (DTT) is a helpful tool to guide surveillance operators automatically to the correct camera and transparently stores his or her clips together in one single exportable file.
- Click “Dynamic Tracker” from Layout List to call up the Dynamic Tracker display mode as shown below:

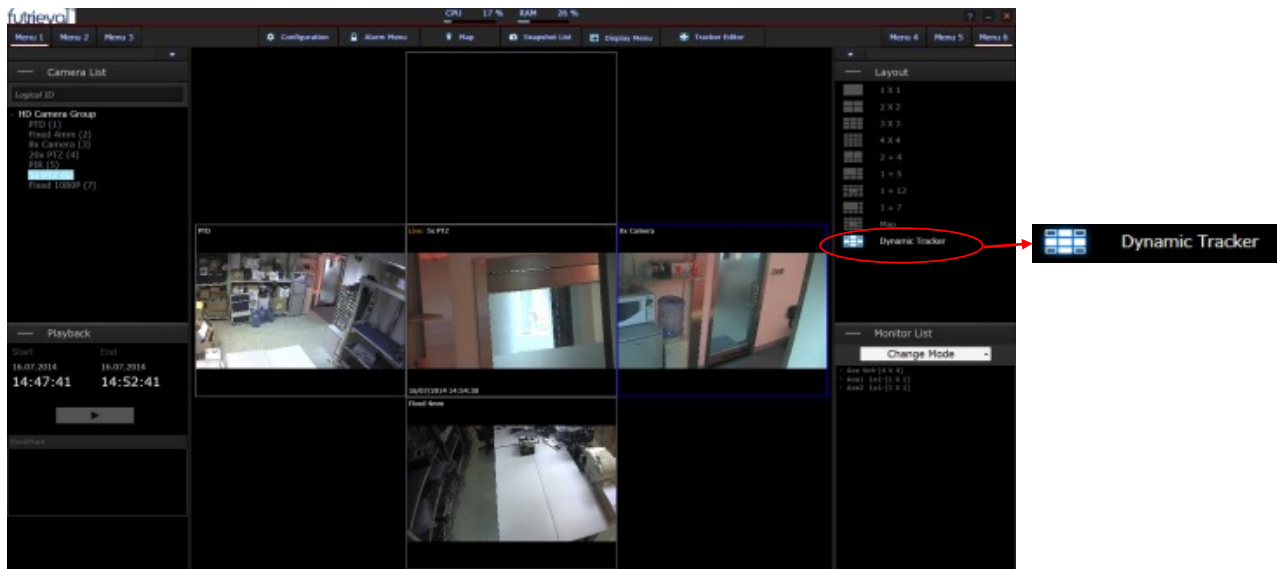


Figure 105: Dynamic Tracker

- When a camera is selected from the Camera List, it will be displayed in the centre. Its adjacent cameras (up to 4 cameras) will be displayed automatically based on the physical location of the centered camera on the map.
- In the example of the following figure, the centered camera is C1 surround by 4 other adjacent cameras i.e. C2, C3, C4 and C5.

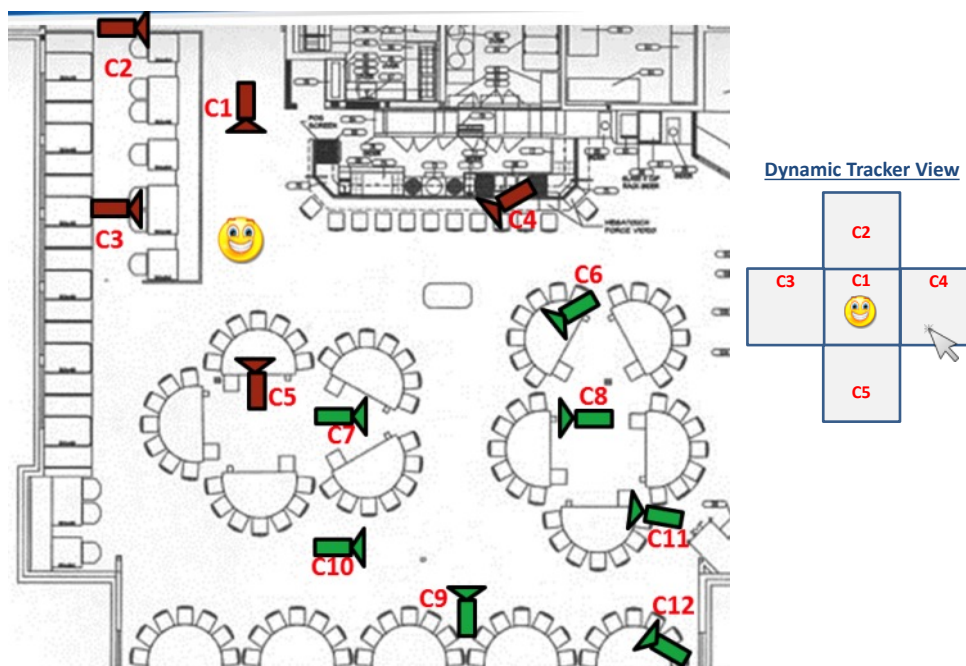


Figure 106: DTT Concept 1

- (e) When user clicks on another camera from the Dynamic Tracker View, e.g. C4. Its adjacent cameras i.e. C2, C3, C4 and C5 will be displayed automatically on the Dynamic Tracker View.

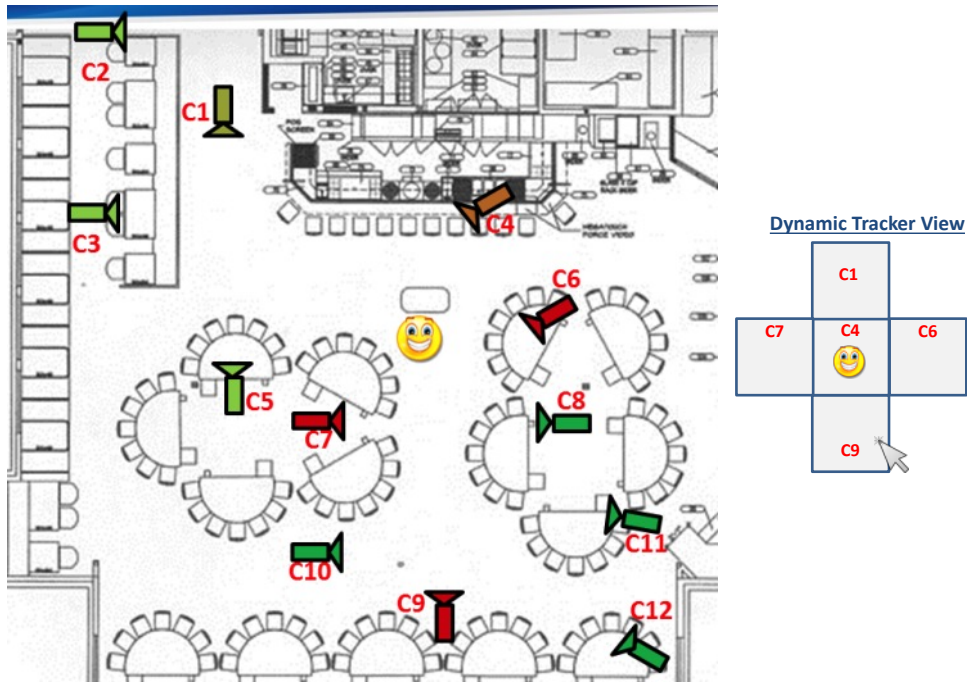


Figure 107: DTT Concept 2

- (f) User can continue to click on other camera from the Dynamic Tracker View (e.g. C9) to do the tracking. Its adjacent cameras (C8, C10 and C11) will be displayed automatically.
- (g) After all, these tracking actions will be recorded that can be later called up for review and export. Apart from live camera tracking, The DTT progress can also be done for reviewing playback.

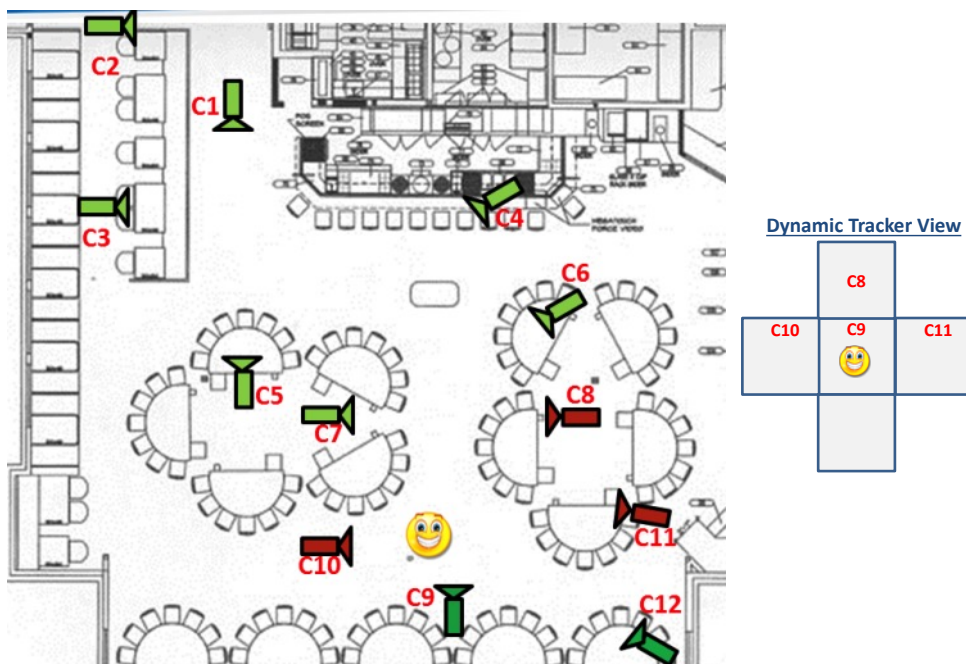


Figure 108: DTT Concept 3

Tracking List		
Cam	Start Time	End Time
C1	01/07/14 03:00	01/07/14 03:03
C4	01/07/14 03:04	01/07/14 03:18
C9	01/07/14 03:19	01/07/14 03:22

13.2. Start DTT

(a) To start DTT,

- i. Click “Dynamic Tracker” from the Layout List



- ii. Select initial camera from the Camera List for tracking
- iii. Start live viewing or playback by inputting the date & time
- iv. Continue tracking by clicking on the corresponding window (top, bottom, left or right) whenever the user sees any desired camera image
- v. Close streaming when finished.

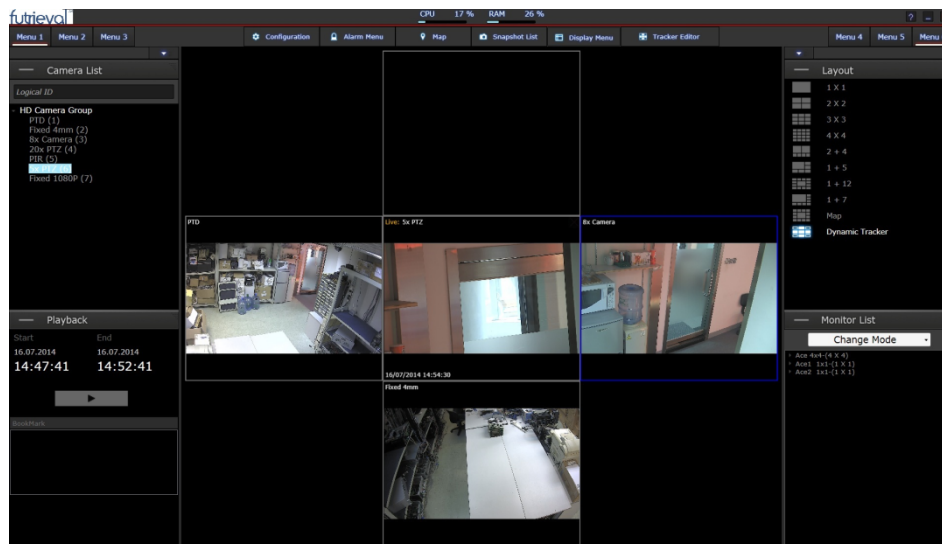


Figure 109: DTT - Live Tracking

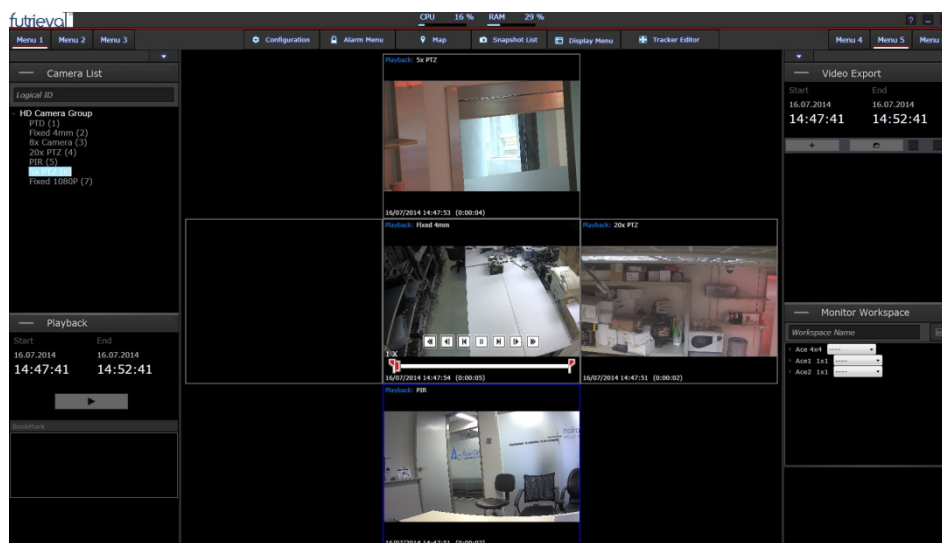
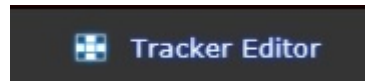


Figure 110: DTT - Playback Tracking

13.3. Tracker Editor

13.3.1. Editing and Exporting Tracking Record

- (b) To edit DTT tracking progress,
 - i. Click "Tracker Editor" from the Top Menu Bar



- ii. Select Start & End time of the tracking period that has been made

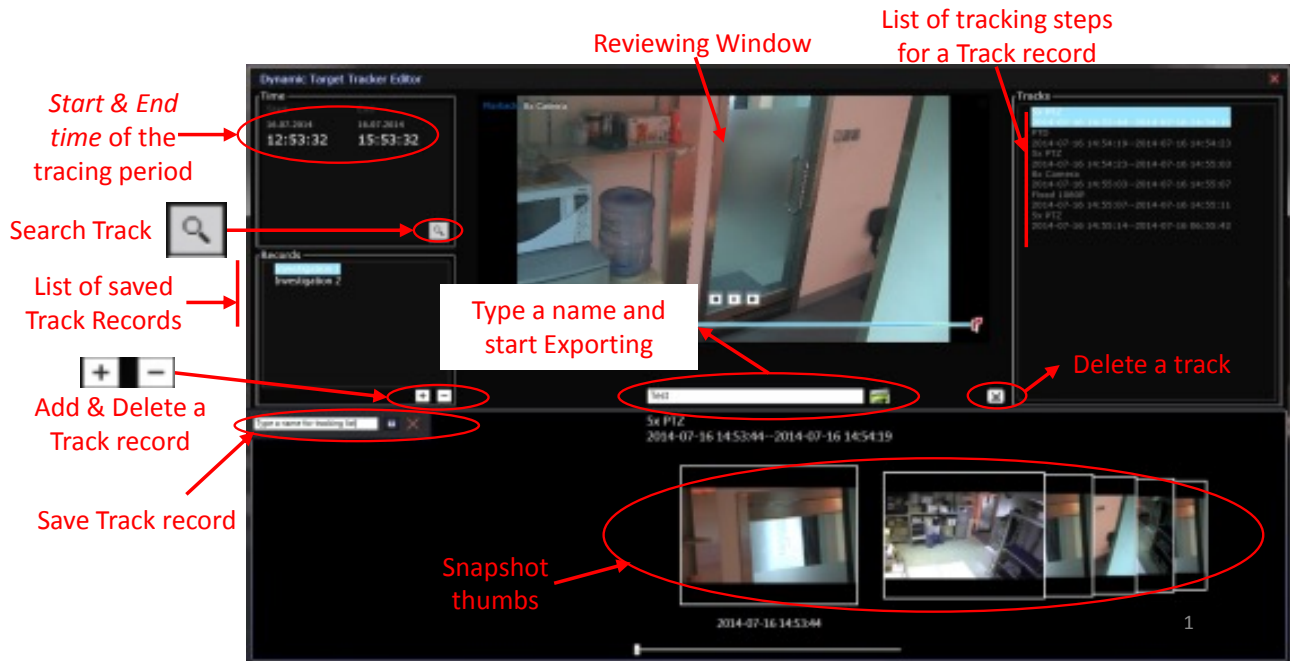


Figure 111: Tracker Editor

- iii. Click on "Search Track" button 
 - iv. Review and delete the video tracks listed on the right hand side or snapshot thumbs at the bottom
 - v. Type a preferred "Export Session" name
 - vi. Start exporting immediately by pressing "Export" button



Figure 112: Exporting from DTT

13.3.2. Saving a Tracking Record

- (a) After editing a tracking list, user can save the whole list as a Track record:
 - i. To "+" to add a Track record



- ii. Type in a Track Record name to save a sequence of tracking steps

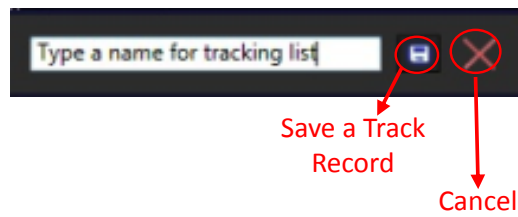


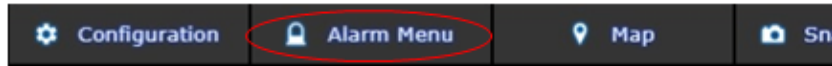
Figure 113: Saving Tracking Record

- iii. Press “Save” to save the track record or “Cancel” to cancel the saving progress
 - iv. To review the track record, user can double-click on the desired track record from the list.
- (b) User can export the track record by typing a preferred “Export Session” name and pressing “Export” button as shown in Figure 112.

14. Alarm Menu

14.1. Starting Alarm Menu

- (a) User can click on "Alarm Menu" from the Top Menu Bar.



14.2. Active Alarms

- (a) The active alarm shows a list of current active alarms.

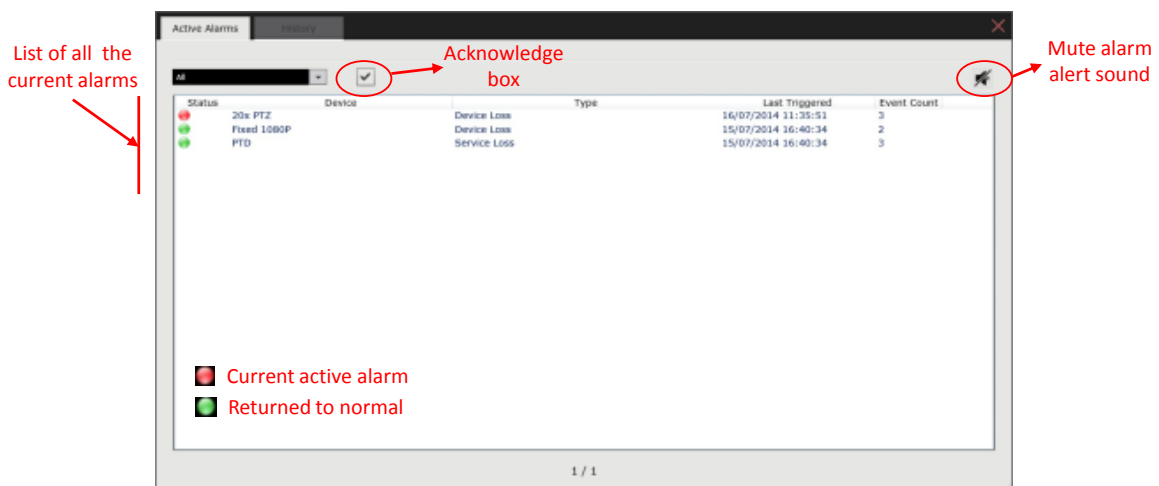


Figure 114: Active Alarms

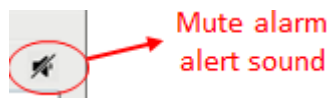
- (b) The description of the Active Alarm item is shown as follows:

Item	Description
Status	 Current active alarm;  alarm returned to normal
Device	Name of the device, e.g. camera name, VMS and NVR
Type	Type of the alarm, e.g. Device Loss, Service Loss
Last Triggered	Date and time of the last triggered alarm
Event Count	Number of events occurred

- (c) To acknowledge the alarm, tick on the acknowledge box

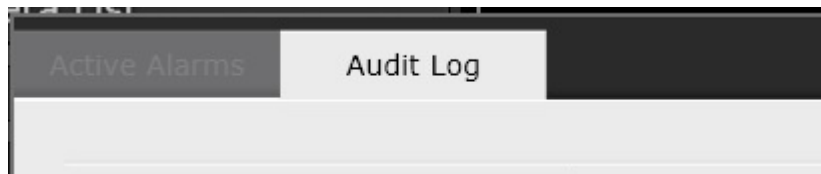


- (d) To mute the alarm alert sound, press the Mute button



14.3. Audit Trail

- (a) Audit Trail can be called up from the “Alarm Menu”.



- (b) Or it can be called up from the “About Box”.

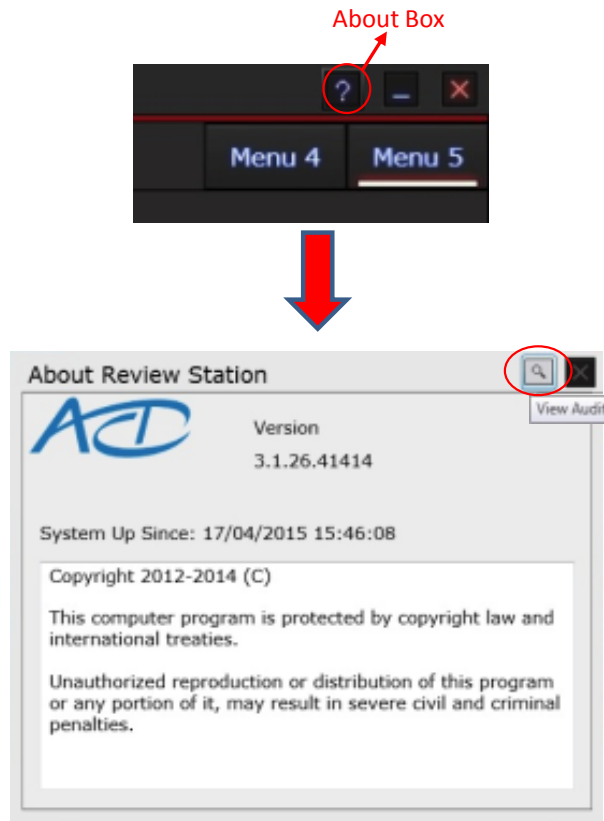


Figure 115: Calling Audit Trail from About Box

- (c) The Audit Trail is shown in Figure 116 that lists out the following information as described in the following table:

Item	Description
Date & Time	Date and time of the audit trail log
User	Name of the RS logon user
Type	Type of the audit log, i.e. Log In/Log Out; Start Live, Playback, Video Export, PTZ and Snapshot
Description	Description of the event, e.g. camera name

- (d) Audit logs can be searched by Type and Time.

Active Alarms		Audit Log			
All		18.03.2015 11:54:47 ~ 17.04.2015 11:54:47			
- All - Log In/Log Out - Start Live - Playback - Video Export - PTZ - Snapshot		User	Type	Description	
			Log In		
			Log Out		
			Log In		
			Log Out		
			Log In		
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Log Out		
			Log In		
			Start Live	Fix 4mm	
			Start Live	NOD 8x	
			PTZ	NOD 8x	
			PTZ	NOD 8x	
			Start Live	NOD 8x	
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Log Out		
			Log In		
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Start Live	NOD 8x	
			Start Live	Fix 4mm	
			Playback	Fix 4mm (08/04/2015 12:08:48--08/04/2015 12:13:48)	

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Figure 116: Auditor Trail

15. Miscellaneous Functions

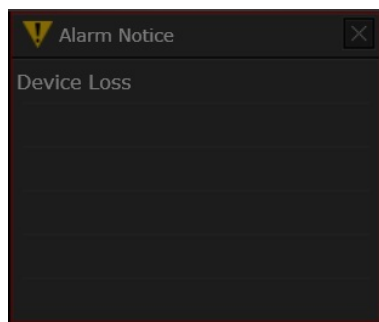
15.1. Device List

- (a) The Device List shows the status of three major types of the system devices: Recorder, Encoder (IP camera) and Decoder.



Figure 117: Device List

- (b) Instant alarm notice will pop up at the bottom right hand corner of RS GUI.



15.2. RS Error Log

- (a) If there is any RS internal error occurred, the error log file in such format: "ErrorlogYYYYMMDD.txt" shall be generated and stored locally in the following path:

C:/Futrieval/cms/review station

- (b) User may be asked to back up and send the error log files for investigation if there is any error being reported.

15.3. External Alarm

To be included.

16. CMS Player

16.1. General

- (a) CMS Player is a standalone player to play back footages being exported from RS.
- (b) .

17. Control Keyboard

17.1. General

(c) Control Keyboard .



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