ETHIRIS®

VIDEO MANAGEMENT SOFTWARE

Ethiris Client User´s Guide ▶

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1 Introduction

1.1 Introduction

This manual is intended to give users a detailed description of Ethiris Client.

There are a total of 6 various manuals for Ethiris. Besides this one, there is also *Installing Ethiris*, *Getting Started with Ethiris*, *Admin - Configuration for Ethiris*, *Integration with Ethiris,* and *Getting Started with Ethiris Mobile*.

This part of the manual suite describes all aspects of Ethiris Client, assuming that Ethiris is already installed on the computer.

For information about how to get started with Ethiris, please see the *Getting Started with Ethiris* manual.

1.1.1 Use

The primary purpose of Ethiris is camera surveillance, which is performed in two ways. One way is manually to monitor live video from different cameras. The other way involves recording video from connected cameras. Recording can take place continuously from one or more cameras or in the form of video sequences when a recording condition is met. The recorded video can be played back afterward using sophisticated timelines and a VCR-like interface.

1.2 General Description

Ethiris is a surveillance system that uses network cameras and analog cameras, together with video encoders from different suppliers.

The product is divided into several program parts, where *Ethiris Server* and *Ethiris Client* is the most important ones. The server part manages all cameras and stores video on the hard disk. The client part displays live video and recorded video sequences.

There is also a program called *Ethiris Admin*, which is used for configuring all Ethiris modules in the system. In *Ethiris Admin,* you configure the *Ethiris Servers* by, e.g., defining which cameras are connected to each *Ethiris Server* when video shall be recorded, what frame rate and resolution to use, etc. You also define the view layout in the various *Ethiris Clients* in the system using *Ethiris Admin*.

In theory, an unlimited number of cameras could be connected to each *Ethiris Server* and be displayed in the desired number of *Ethiris Client's* simultaneously. In practice, however, bandwidth and monitor resolution set limits for the appropriate number of cameras connected.

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There are different license levels for Ethiris, which enable different functionality of the server; the license also defines the number of cameras that can be connected. To meet the need for a large number of cameras, Ethiris is designed with a focus on scalability. Scalability means that it is possible to divide your system into several Ethiris servers and thus distribute the load over several computers.

Ethiris Server

Ethiris Server is the core of an Ethiris system. It handles all communication with the cameras and recording of video on a hard disk. Ethiris Server runs as a service under the operating system and is automatically started as soon as the computer is started. An Ethiris system can be comprised of one or several Ethiris Servers.

Ethiris Client

Ethiris Client is used for viewing live video and recorded video. An Ethiris Client can connect to one or several Ethiris Servers for access to cameras. An Ethiris system can contain one or several Ethiris Clients.

Ethiris Admin

Ethiris Admin is used for configuring the different parts in an Ethiris system. Both Ethiris Server and Ethiris Client are configured with this common tool. From any computer in the system, Ethiris Admin can be run and used for configuring all Ethiris components on-site.

Ethiris Mobile

Ethiris Mobile is an app for connecting to your Ethiris systems via your cell. With Ethiris Mobile you can watch live video from various cameras in your system. You can also see all the alarms.

Ethiris Server OPC Server

Ethiris Server OPC Server is a separate Ethiris component that is used for letting other systems gain access to the information in Ethiris Server. Any other system with an OPC client can connect to one or several Ethiris Servers and read/write to all signals in Ethiris Server. E g starting recording of a camera or control a PTZ camera.

Ethiris ActiveX

Ethiris ActiveX is a component used for viewing live video from a camera connected to an Ethiris Server. This component can be used in any system that can handle standard ActiveX components.

Ethiris Viewer

Ethiris Viewer is a separate program used for viewing exported video from an Ethiris system.

Ethiris Signature Validator

Ethiris Signature Validator is a separate software that is used to validate the authenticity of exported video and jpg images, so-called watermark.

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2 Ethiris Client

2 Ethiris Client

2.1 Client windows

2.1.1 Overview

In this section, we will take a closer look at the user interface in Ethiris Client and its various windows, toolbars, menus, and panels.

The main window is made up of several smaller parts. Some of these, like the main menu and toolbar, are fixed in size and position, while others, like the *Default Live panel*, can be moved around, docked, resized, and even closed.

There are two types of windows in Ethiris Client; *Document windows* and *Tool windows*.

Document windows (a.k.a. panels) are used for presenting various types of information such as live and recorded video. In Ethiris Client, there are four document windows by default. These are *Default Live panel*, *Events panel*, *Alarms panel,* and *Player panel*. You can dynamically create new live windows; these are also a type of *document window*.

Tool windows are used to supply the user with various tools, such as a list of sections or view buttons. In Ethiris Client there are four tool windows. These are *Sections Explorer*, *Views Explorer*, *Cameras,* and *Export Jobs*.

If you close all windows that can be closed in Ethiris Client, there is a menu bar and toolbar at the top. The remaining space is left for the various windows. See *Figure 2.1*.

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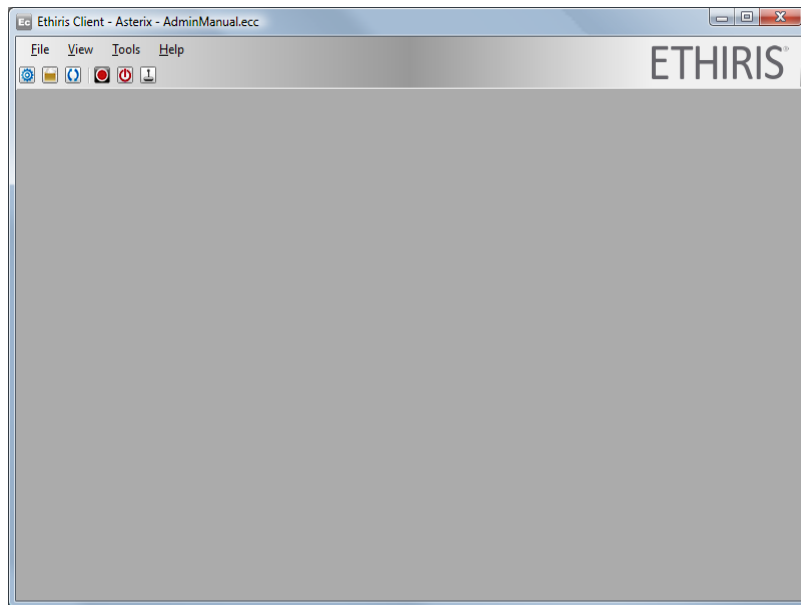
Figure 2.1 The Ethiris Client with all windows closed.

By default, when you start Ethiris Client, the four tool windows are docked to the sides and the bottom of the main frame. See Figure 2.2.
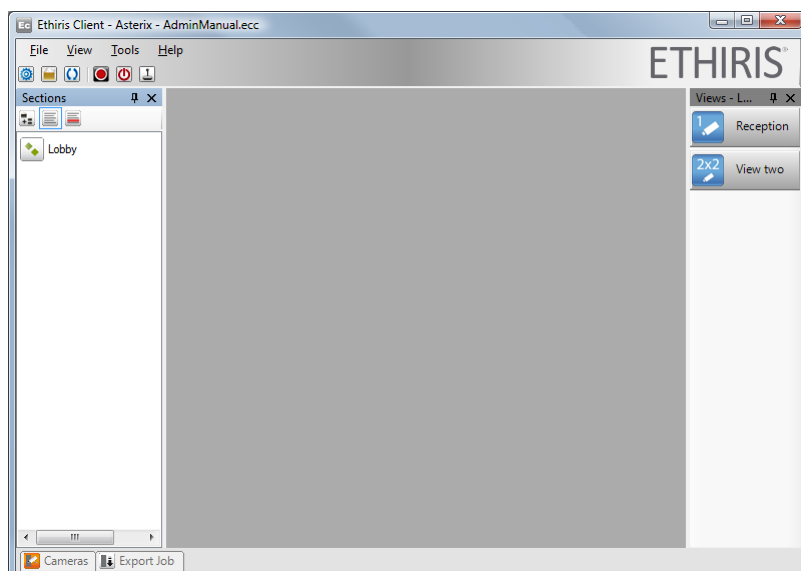
Figure 2.2 The Ethiris Client with just tool windows open.

The *Sections* tool window, by default, is docked to the left edge and is pinned. When a window is docked to the side of the main frame, it automatically becomes a tool window. A tool window has two states, pinned and unpinned.

When a window is pinned, the pin icon is in a vertical position, see *Figure 2.3*. In this state, the window is visible all the time. The width of the window can be changed by moving the inner edge of the tool window.

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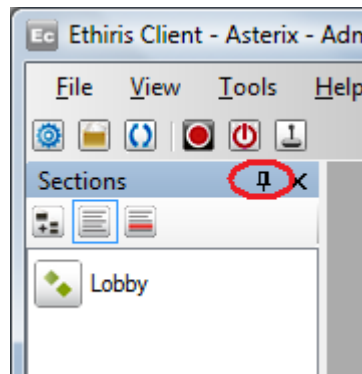
Figure 2.3 A pinned tool window.

To unpin the window, click the vertical pin icon. When a tool window is unpinned and loses focus, it automatically slides in against the edge it is docked to, leaving visible a tag displaying the title of the tool window. See *Figure 2.4.*
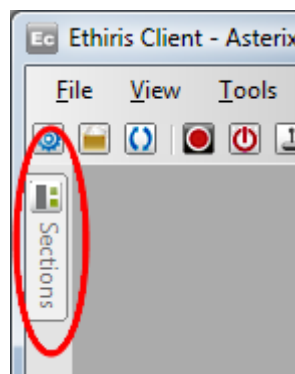
Figure 2.4 An unpinned tool window visible only as a tab.

To make the tool window visible again, move the mouse pointer over the tab, and the window slides out. In this state, the tool window has not yet received focus, see *Figure 2.5*. This means that if you move the mouse pointer outside the window, it slides back to the edge again.
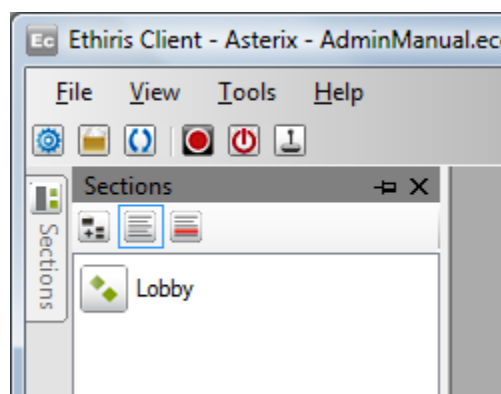
Figure 2.5 An unpinned tool window made visible again, but without focus.

To make the window stay out, click the window title area. Notice in *Figure 2.5* that the title area is light blue. This means that it has not got focus. A tool window with focus has a blue color, see *Figure 2.6*. As long as a tool window has focus, it does not slide back to the edge.
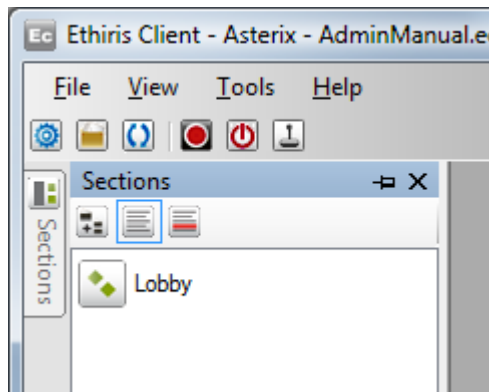
Figure 2.6 An unpinned tool window with focus (blue title bar).

To pin the window again, click the horizontal pin icon.

The whole idea with unpinning the tool windows is that the remaining space in the main frame is increased.

As you can see in Figure 2.2, the Views Explorer tool window is docked and pinned to the right edge.

The *Cameras* and *Export Jobs* tool windows are docked to the bottom of the main frame. These two tool windows are unpinned hence just the tabs are visible.

When you start Ethiris Client, not only the four tool windows are open, but also the four document windows. The document windows are by default in the remaining area of the main frame in the middle, grouped as a tab group. See Figure 2.7.
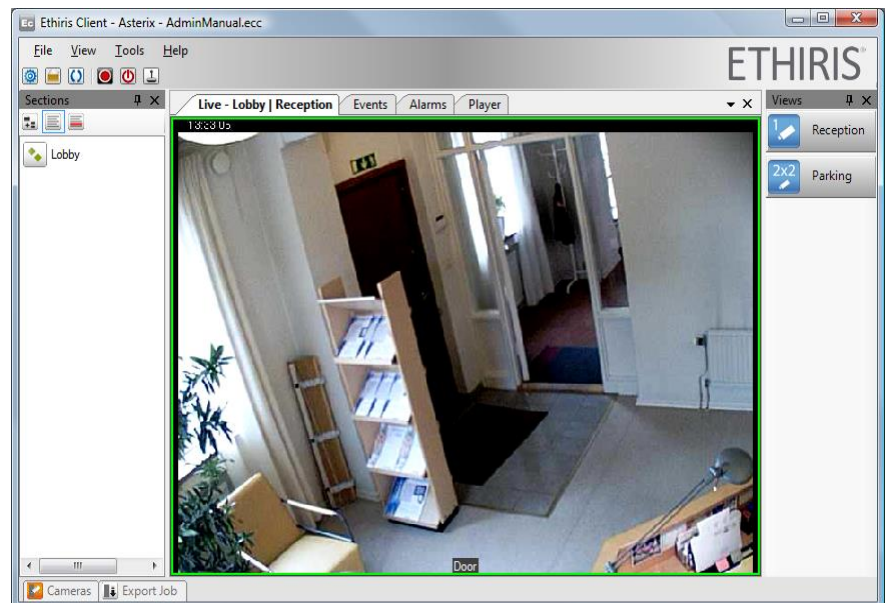

Figure 2.7 Ethiris Client by default, all windows open.

In a tab group, only one tab at the time can be visible. In the example above the *Default Live* panel is on top and visible. To view another panel in the tab group, simply click the corresponding tab.

If you e.g., click the Player tab, the Player panel becomes visible instead. See *Figure 2.8*.

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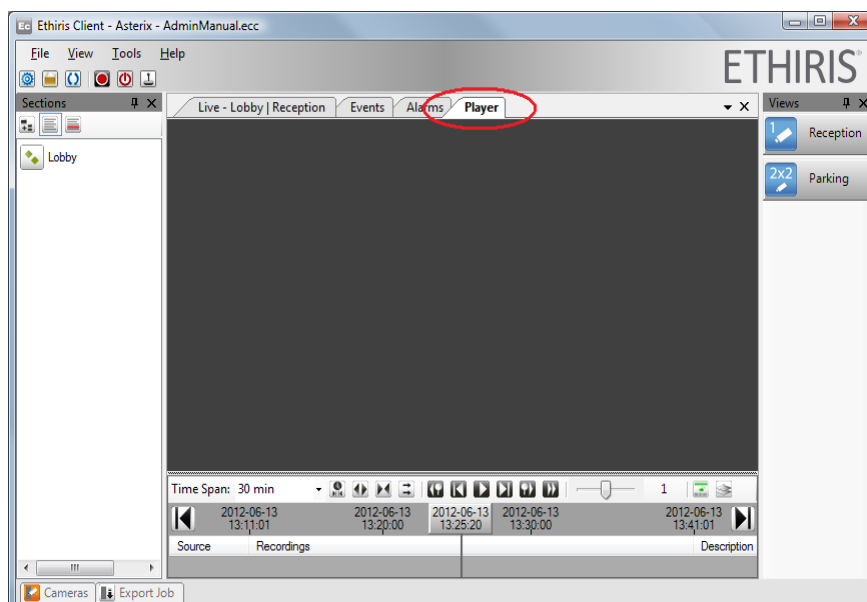
Figure 2.8 Player panel on top.

Now, not every user may like the default layout of the various windows. In the next section, we will look at the different possibilities of customizing the user environment.

2.1.2 Changing the layout

Every window in Ethiris Client can be moved, resized, and docked at various positions. They can even be torn away from the main frame and become floating windows that can be positioned anywhere, even onto another monitor.

As soon as you start moving a panel (by clicking the tab with the windows name, hold the mouse button down and moving the mouse) the whole window becomes translucent. Some visual guides also appear, see *Figure 2.9*.
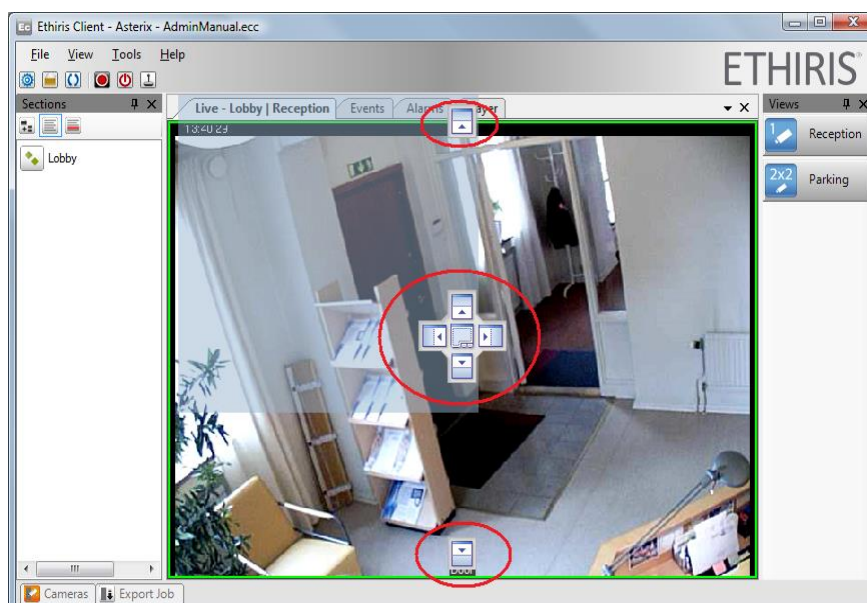
Figure 2.9 About to move the Default Live panel.

As you continue to move the mouse (while still holding down the left mouse button) you get visual feedback of how the window will be positioned when you release the mouse button. In *Figure 2.10,* the mouse pointer is over the visual guide marked by a red ring.

If you change your mind and do not want to move the window, simply press the Esc key or right-click the mouse, and the move is aborted.

Press the Esc key to abort the window move.
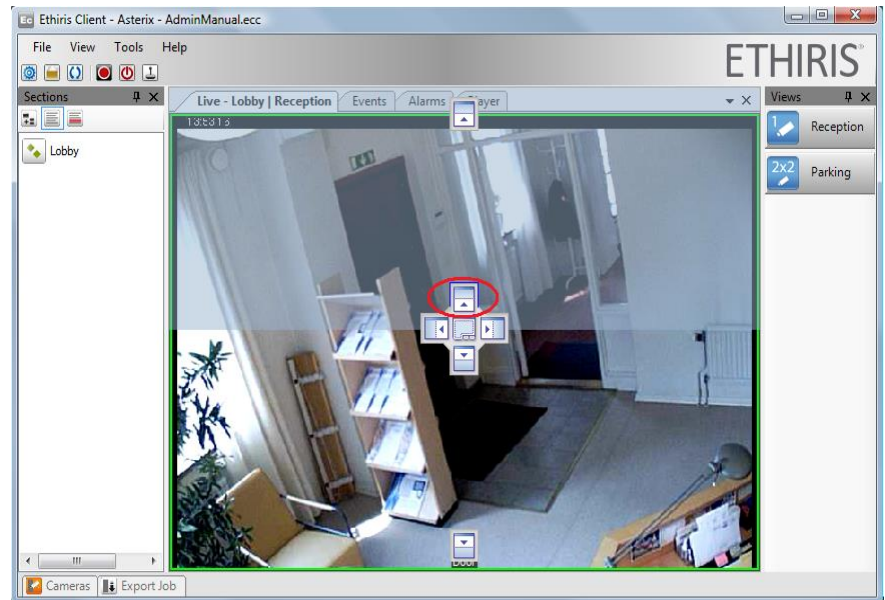
Figure 2.10 Mouse pointer over the "top" visual guide.

Notice how the translucent blue indication shows that if you release the mouse button in this position, the window will be positioned above the other three panels. See *Figure* 2.11 for an example of how this would look.
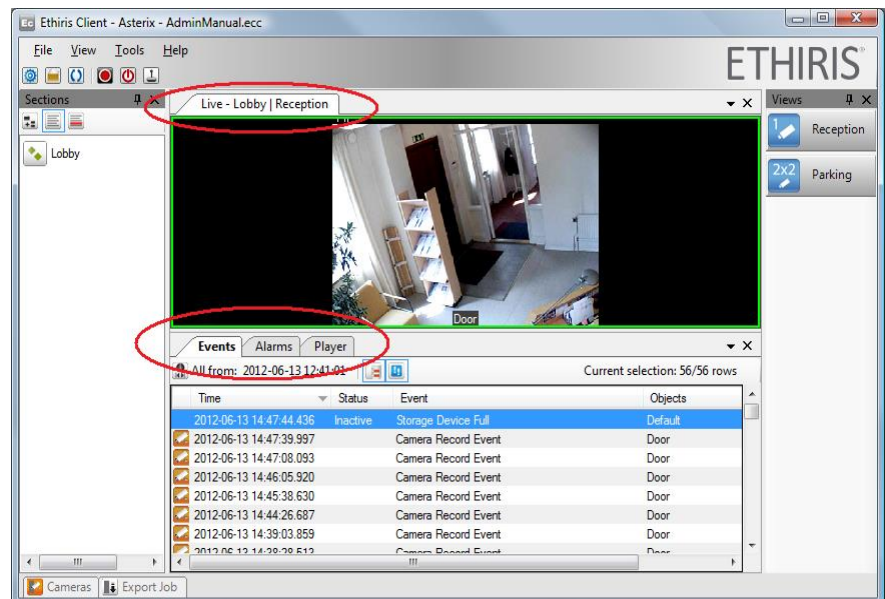
Figure 2.11 Default Live panel is now moved above the other panels.

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Now, the Default Live panel is in its own tab group above the lower tab group containing the remaining three panels. It is now possible to view two document windows at the same time. The area is, of course, smaller for each one of them since they have to share what is left in the main frame outside the tool windows.

Between the two tab groups is a splitter bar, which you can move to change the vertical size of the two groups, see *Figure 2.12*.
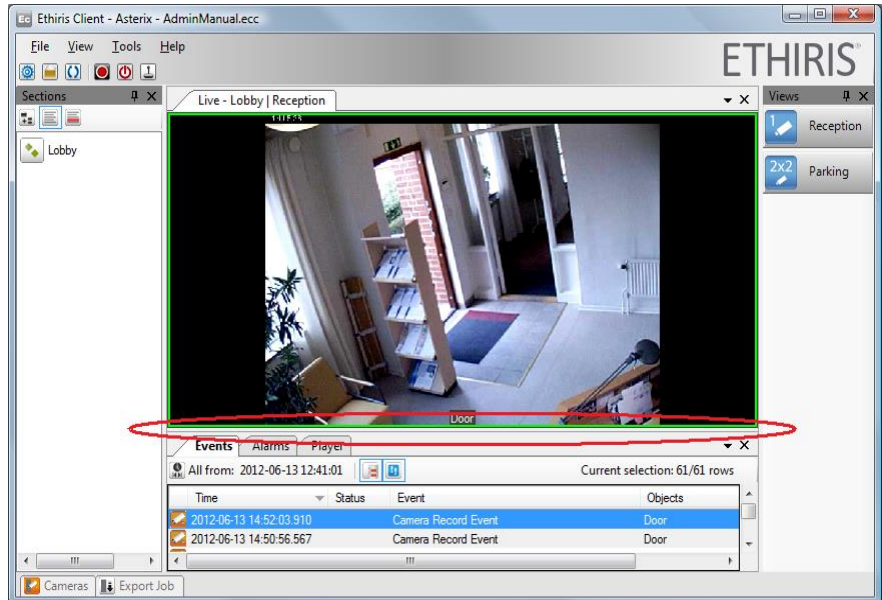
Figure 2.12 Move the splitter bar up/down to resize the windows.

If you want the Default Live panel back to the tab group with the other three panels, you can simply drag the window and drop it on the center visual guide. Note that you have to move the mouse pointer over the lower tab group to make the visual guides visible, see *Figure 2.13*.
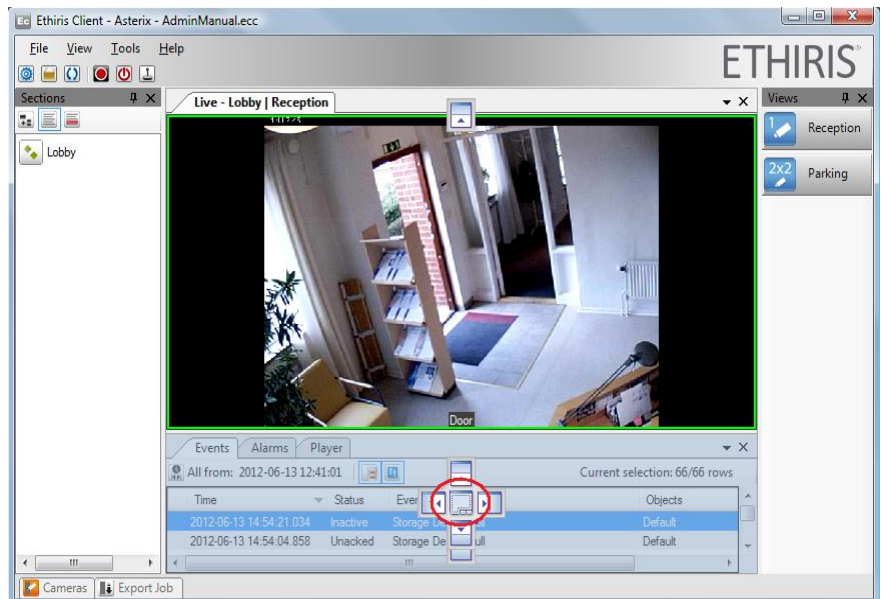
Figure 2.13 Moving the Live panel back again.

Change the order of tabs

As you move the Live panel back to the original tab group, it is positioned last instead of first. To move it back to the first position (left-most position), drag the tab and drop it onto the Events tab, see *Figure 2.14*. In this manner, you can change the order of any panel within a tab group.
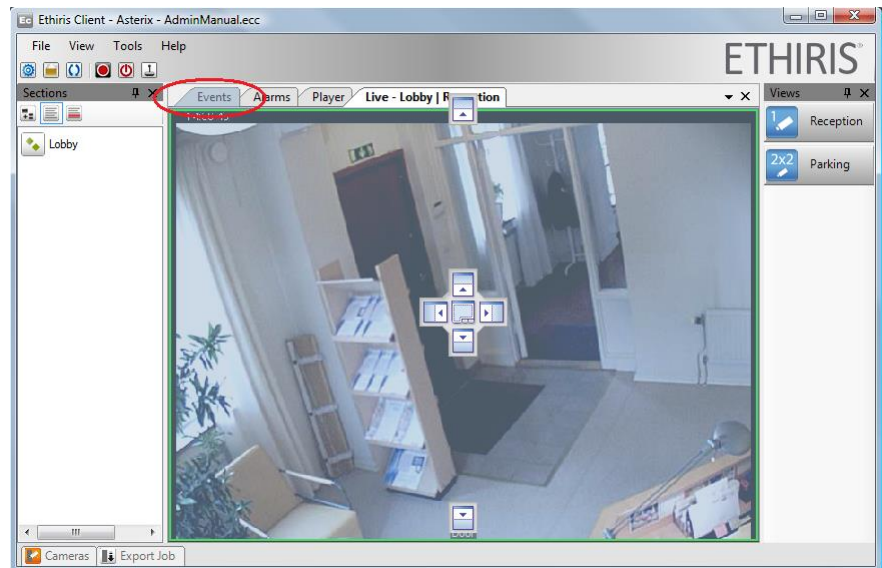
Figure 2.14 Moving the Live panel to the left-most position.

Visual guides

When moving a window to a tab group, i.e., onto another window, the visual guides, as in *Figure 2.15* appears.
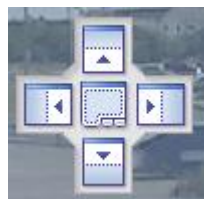
Figure 2.15 Visual guides with 5 different positions.

There are 5 alternative positions. If you release the mouse button over the center guide, the dragged window will become a new tab in the group. If you release the mouse button over the Left, Top, Right, or Bottom guide, the window will be positioned in a new tab group, splitting the current tab group area into two equally large areas.

Docking a window

Another alternative is to dock the window to any of the edges of the main frame. Only the sides where no tool window is pinned are available. In *Figure 2.16,* only the top and bottom edge of the main frame are available for docking.
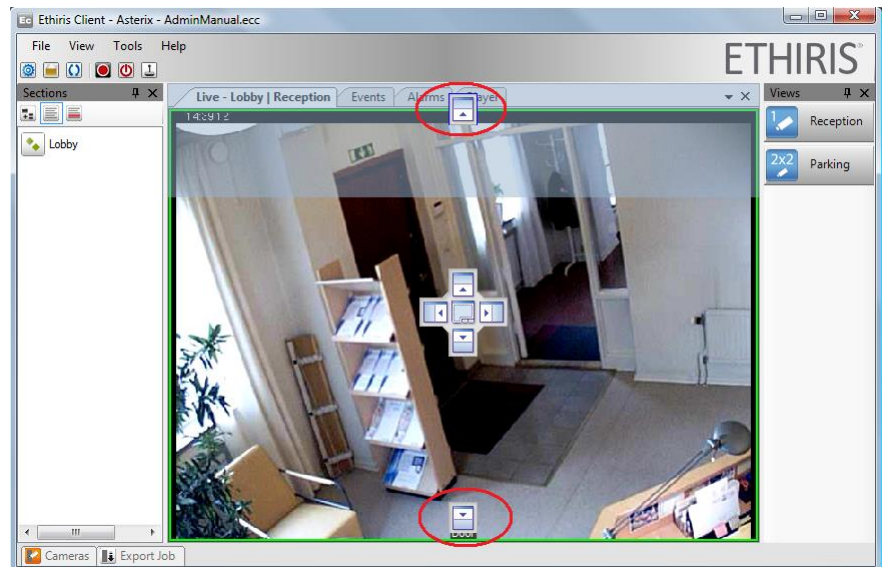
Figure 2.16 You can dock the window on top or bottom.

When you dock a window, it automatically becomes a tool window that can be pinned and unpinned. When you dock a window, it is pinned by default, see *Figure 2.17*.
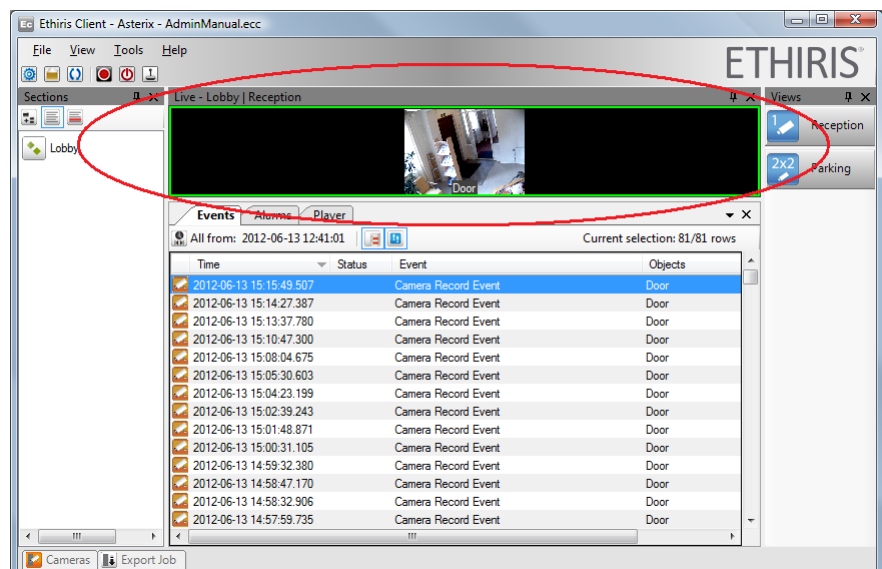
Figure 2.17 Live panel as a tool window docked and pinned at the top edge of the main frame.

To make the tool window slide in, unpin it. See Figure 2.18.
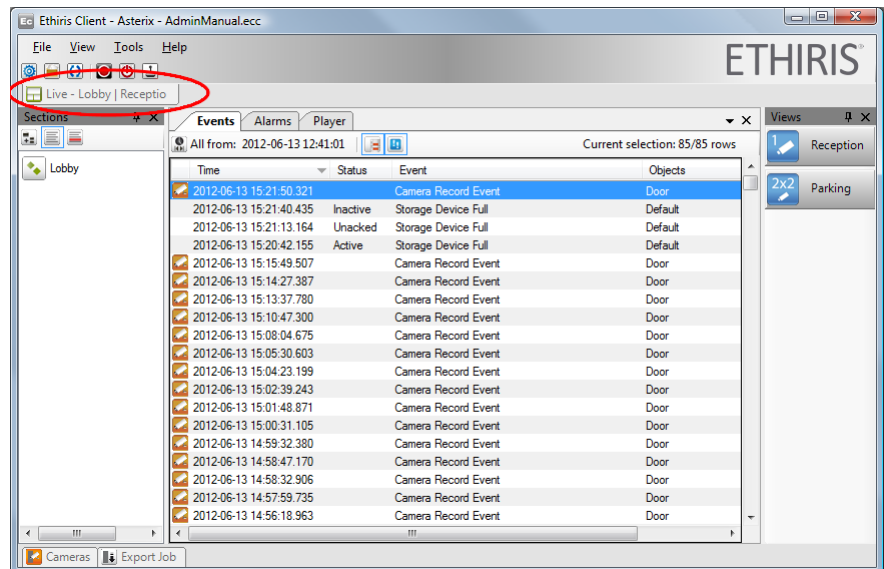
Figure 2.18 Live panel unpinned at the top of the main frame.

Tab groups

When it comes to the original tool windows, they cannot be positioned in the central tab group, i.e., onto another document window. They can only be dragged to another tool window or docked to one of the edges of the main frame.

Let's say we would like to move the Views Explorer tool window to the Sections Explorer tab group. Just drag the Views Explorer window and drop it onto the center visual guide on the Sections Explorer window. See *Figure 2.19*.
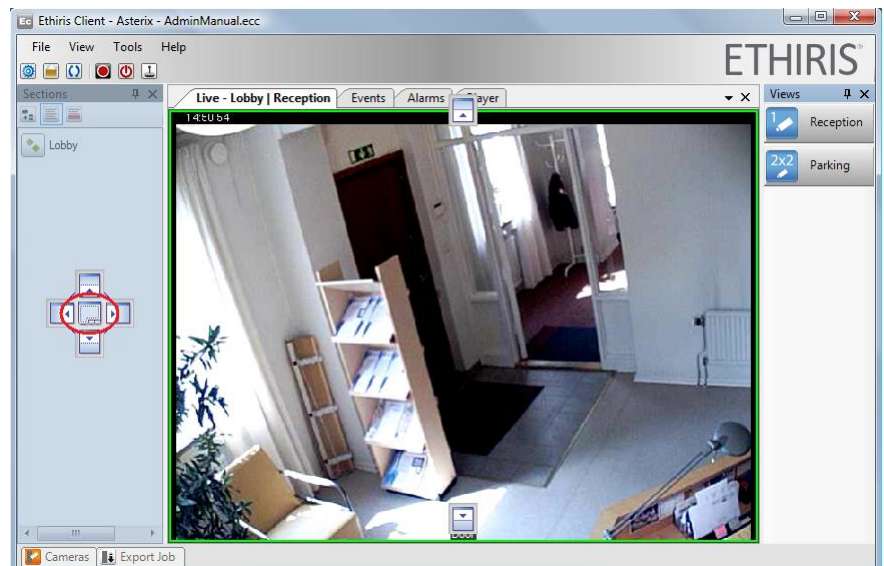
Figure 2.19 Views Explorer will be moved to the Sections Explorer window.

In this case, the Views Explorer window becomes a new tab in the tab group. Now either the Views Explorer or the Sections Explorer is visible, not both at the same time, see *Figure 2.20*.

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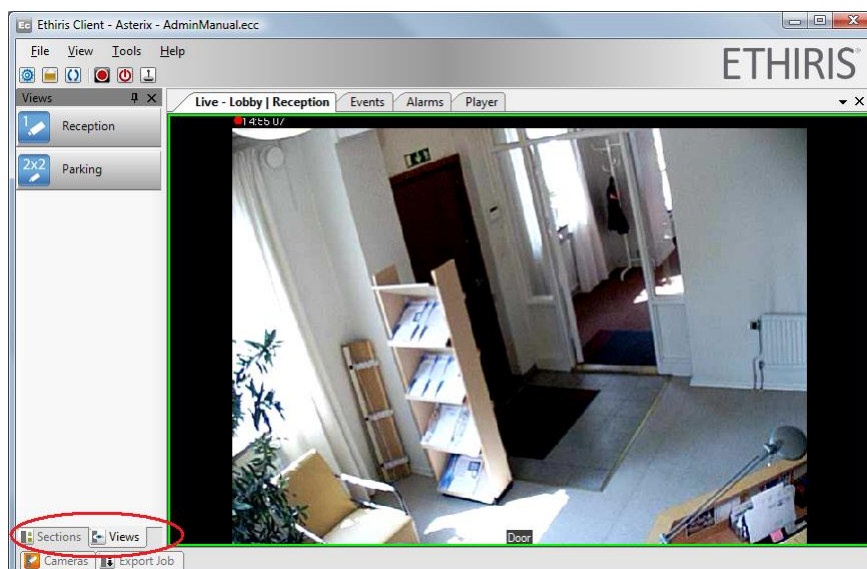
Figure 2.20 Views Explorer is a tab together with the Sections Explorer.

Now the Live panel and the other central document windows have more screen real-estate to the right.

Floating windows

You may not be satisfied with this. Let's tear away the tool window altogether. If you want to move the entire tab group, grab the window title bar. If you only want to move one of the tabs, grab the specific tab instead. In the next example, we will move the whole tab group, i.e., both the Sections Explorer and the Views Explorer, and make it a floating window. See *Figure 2.21*.
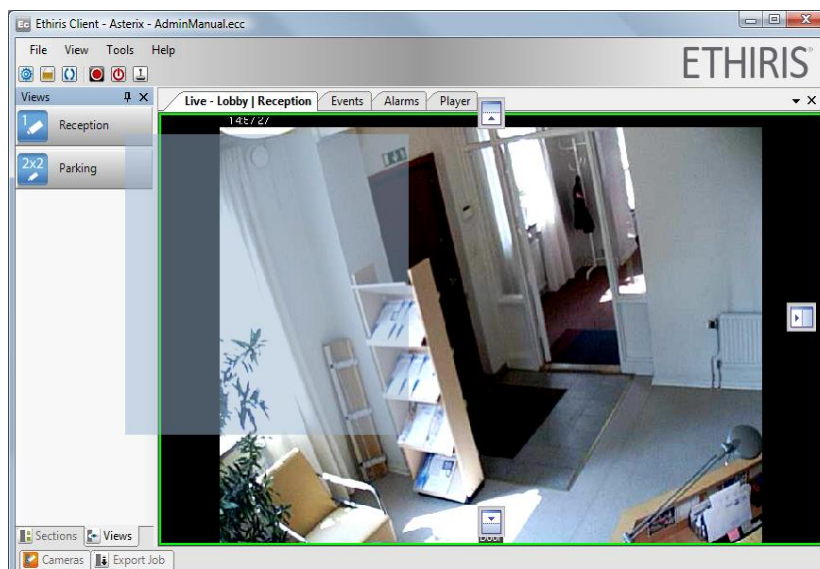
Figure 2.21 The Views Explorer and Sections Explorer tab group is torn away.

If you release the left mouse button in this state, the tool window will become floating, see *Figure 2.22*.

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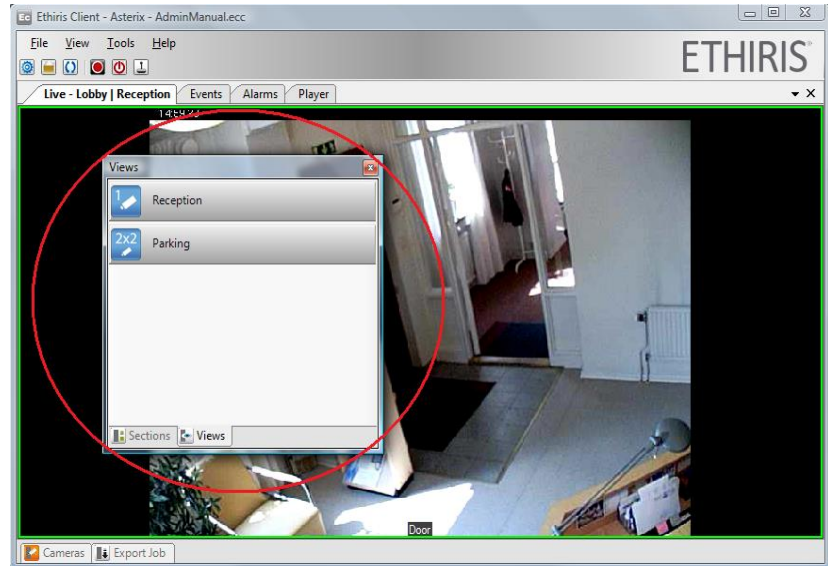
Figure 2.22 A floating tool window.

Double click the window title bar to move it to its previous position.

To move the window back to its previous position, double-click the title bar. Double-click the title bar again and the window is repositioned again to the last position. This way, you can toggle between the current and previous positions.

Anyway, when the window is floating, you may resize it to the desired size, and you can position the window anywhere on any screen. Naturally, you can tear away a document window, like the Live panel, and make it a floating window.

Tab list

In a tab group with *document windows,* there is a list of all the windows part of the tab group. There is a down arrow in the upper right in the tab group. Clicking the arrow opens a list of all the windows in the group.
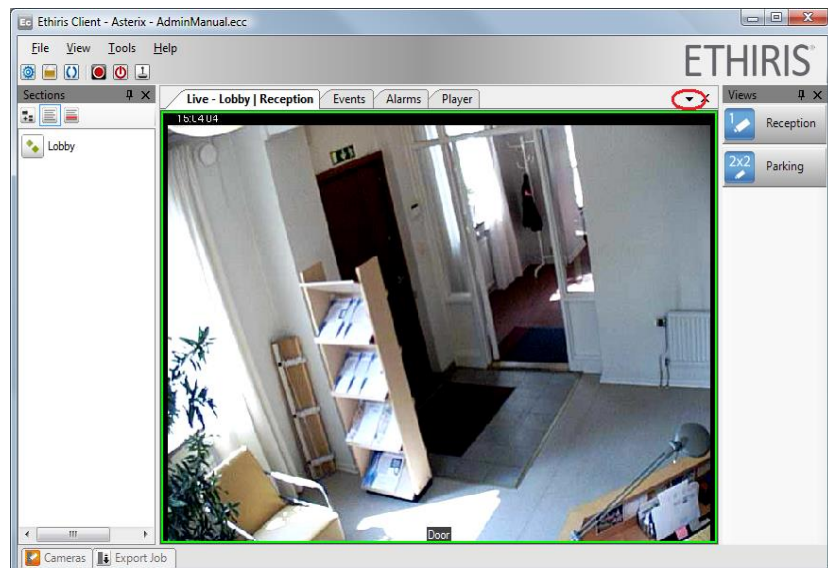
Figure 2.23 Show the tab list by clicking the down arrow in the upper right corner.

If all tabs can't fit, some tabs may be hidden. This is indicated by an underlined down arrow, see *Figure 2.24*.
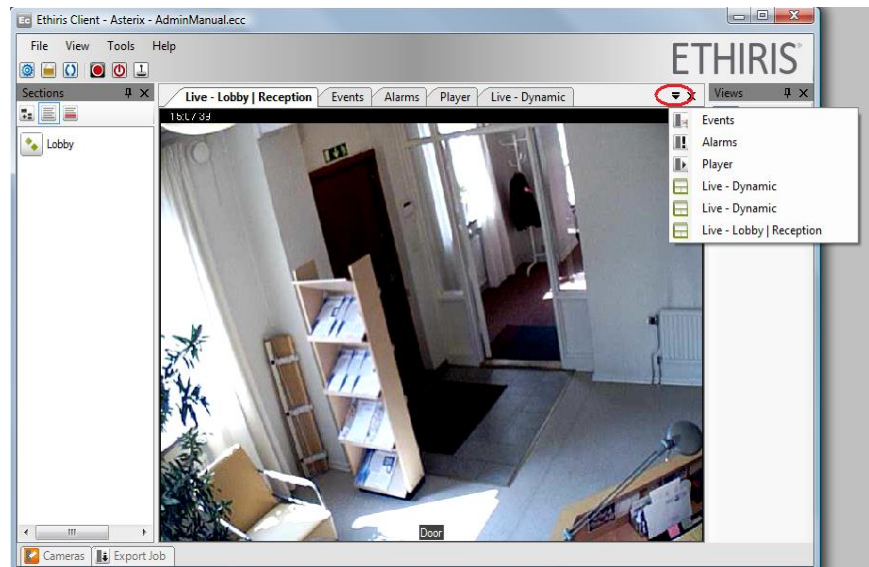
Figure 2.24 Hidden tabs are displayed in the window list.

Closing windows

Some of the windows may not be useful to you. Then, just close it by clicking the *Close* button in the window title bar. In *Figure 2.25,* the close buttons for the *Sections Explorer* tool window, the *Live panel,* and the *Views Explorer* tool window are ringed in.
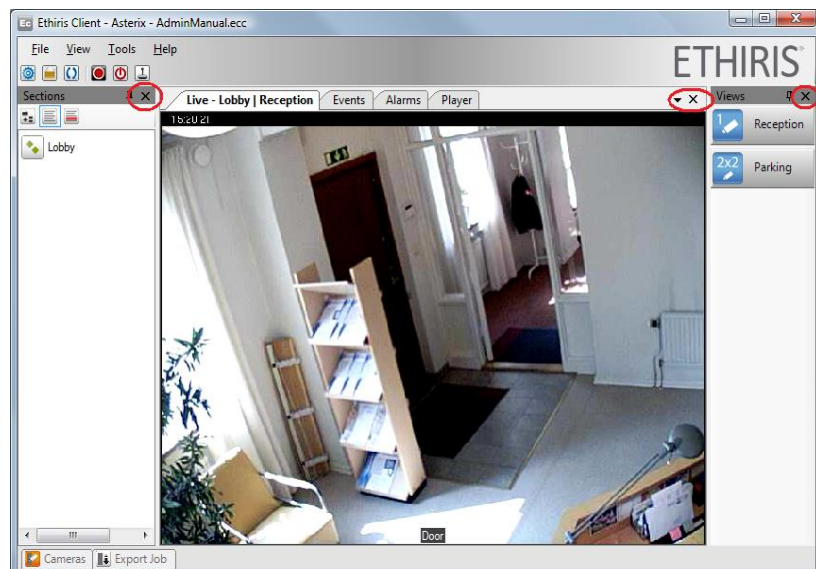
Figure 2.25 Close buttons of various windows.

If you accidentally close a window and want it open again, all windows can be opened from the *View* menu. Simply select the desired window in the menu.
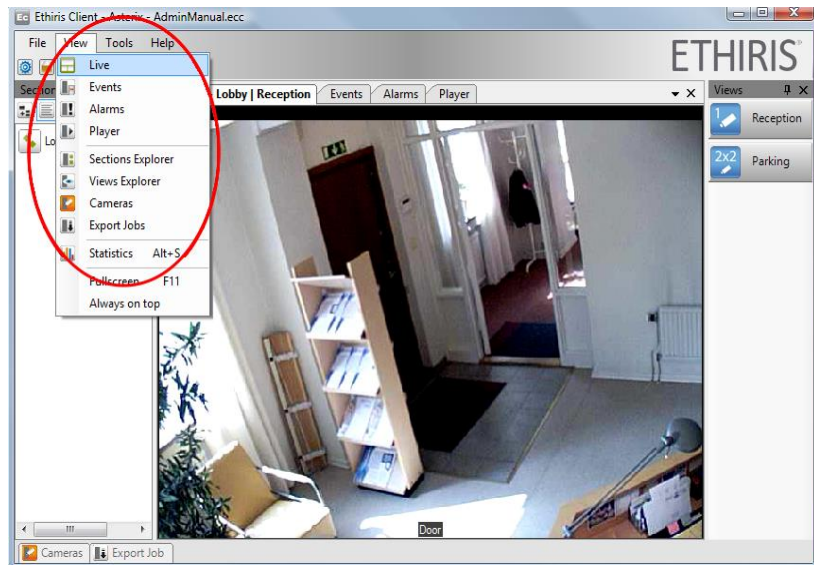
Figure 2.26 The View menu can be used to open desired windows in Ethiris Client.

Save and reset the layout

Ethiris Client can save your current layout – either manually or automatically – and allow you to recall the saved layout at a later time. You can also reset the layout back to the default settings if desired.

These options are available from the *Tools* menu.
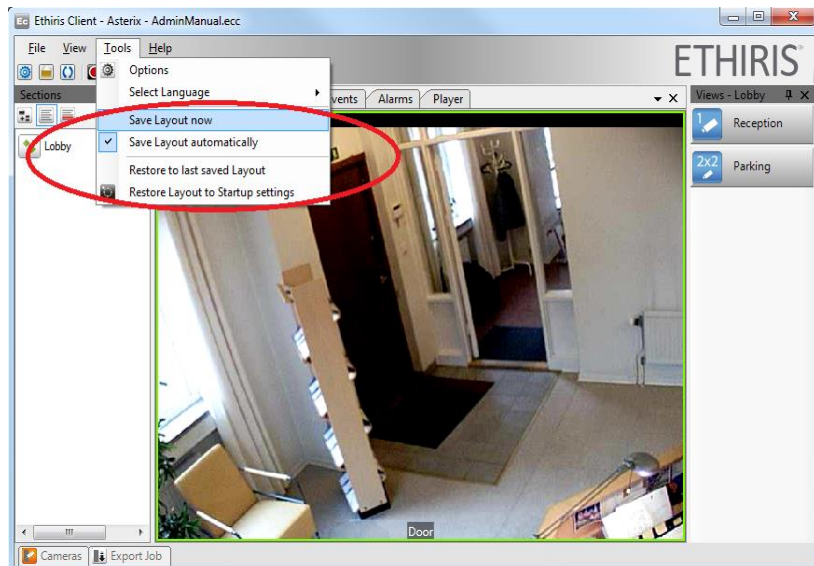
Figure 2.27 Save and restore the layout.

2.2 Main menu bar

2.2.1 Overview

In this section, we will inspect all the menus and learn what each menu item is for. You can access the menus by selecting them with the mouse, but you can also press the *Alt* key on the keyboard to activate the menus.

When the Alt key is pressed, menu shortcuts appear (underlined letters). Pressing e g *Alt+F* opens the File menu.

You can also move between menus and menu items with the arrow keys. Press Enter to select a menu item.

Keyboard shortcuts

Several keyboard shortcuts may be of use in the live view. To access the keyboard shortcuts, press the *Alt* key. When *Alt* is pressed the available shortcuts appear as underlined letters in menus and buttons.

By default, only items in the main menu have keyboard shortcuts. These are:

Alt-F – File menu.

Alt-E – Exit menu item in the File menu.

Alt-V – View menu.

Alt-T – Tool menu.

Alt-H – Help menu.

Alt-R – Manual event recording.

Alt-L – Log in.

Alt-F – Freeze/unfreeze video in the selected camera view.

Alt-S – Show *Statistics dialog*.

Alt-I – Show *Instant replay* view for the selected camera.

Alt-<left arrow> – Increase instant replay time

Alt-<right arrow> – Decrease instant replay time

Alt-T – Start/stop using the microphone to send speech to the camera.

Alt-G – Start/stop using the microphone to send speech to all cameras in the view.

Other letters may be used for separate keyboard shortcuts by giving view buttons texts with the & sign before the required letters.

2.2.2 File menu
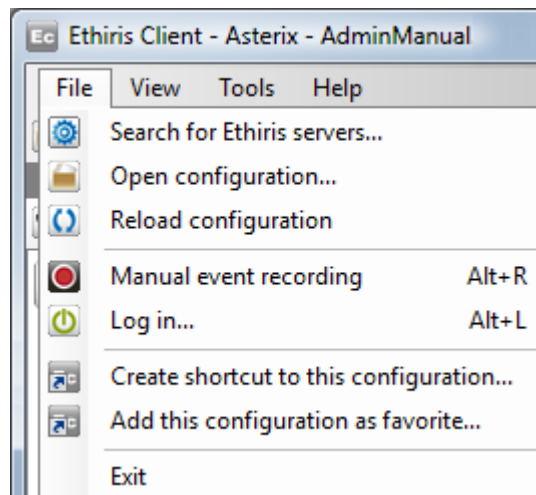
Figure 2.28 The File menu in Ethiris Client.

Search for Ethiris servers… is used to open the dialog *Search for Ethiris servers* where you can search for a server on the network, manually connect to a server or open a favorite configuration.
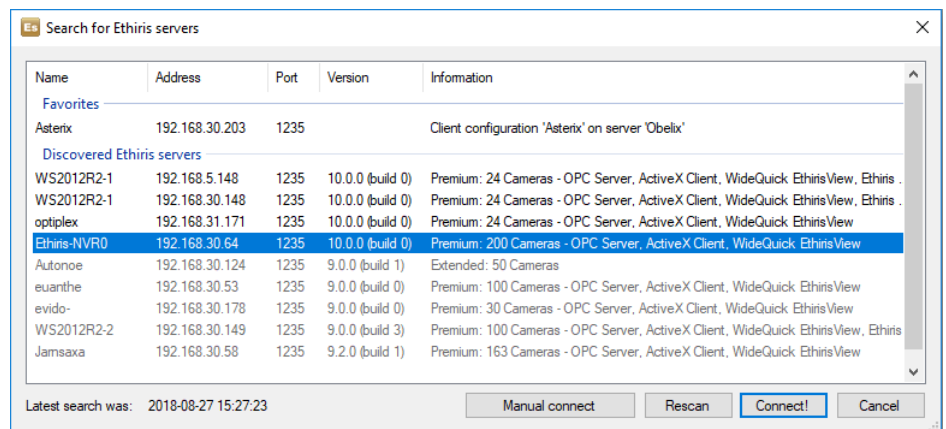
Figure 2.29 The Search for Ethiris servers dialog

Select a configuration server from the list and click on *Connect*. If the desired server is not in the list, click on *Manual connect*, enter the server IP address in the *Address* field and then click on Connect.

You can only connect to servers running Ethiris Server with the main version number that is the same or higher than the main version number of Ethiris Client.

Ethiris Client will connect to the selected Ethiris Server and fetch a list of available client configurations on that server.

If you want to remove a favorite configuration from the list, right-click the line in the dialog and select *Delete.*

Open Configuration… is used for loading a configuration into Ethiris Client. If a configuration already is loaded in the client, the dialog *Client configurations* is shown for the server that provided the currently loaded configuration.

Ethiris Client configurations are handled by a configuration server. When you click on *Open configuration…* the dialog *Connect* is shown. If no configuration is loaded in the client, the dialog *Search for Ethiris servers* will be shown.
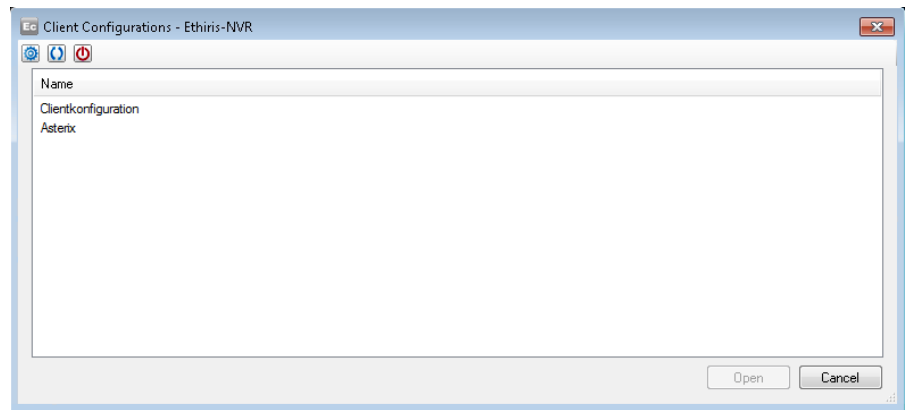
Figure 2.30 The Client configurations dialog

Select the client configuration that you wish to open and click op *Open*. You may also double click on the client configurations in the list to open it.

It is possible to set privilege requirements to restrict who can see and open individual client configurations. See the *Admin - Configuration for Ethiris* manual.

Figure 2.31 Toolbar in the Client configurations dialog

The toolbar has three buttons.

 Open configuration

Use this button to open the *Connect* dialog.

 Refresh

Refresh the list of client configurations.

 Log in

Open the *Log in* dialog.

The client configurations hold information about which Ethiris Servers the client should connect to, which sections, and for each section what client views to display. Layout and which cameras to display in each camera view is also part of the client configuration.

For information on how to create a client configuration, please see the *Admin - Configuration for Ethiris* manual or the *Getting Started with Ethiris* manual.

Reload Configuration is used for updating the client with new information from the current configuration. This may come in handy if you make changes to the client configuration via Ethiris Admin and already have started Ethiris Client.

Manual event recording is used for starting an event recording on the currently selected camera. A live view can consist of several camera views. Each camera view can show live images from a camera. The currently selected camera view has a green frame around it. When you select the Manual Event Recording menu item, the camera in the currently selected camera view starts recording. This is also indicated by a red flashing dot in the upper left corner of the camera view, see *Figure 2.32*.

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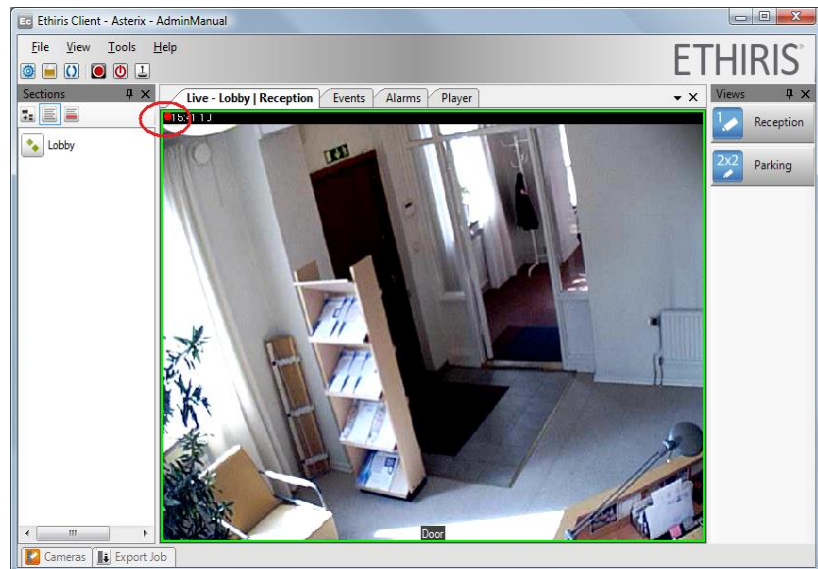
Figure 2.32 Event recording in progress.

Log in… is used for logging in to Ethiris if necessary. By default, no log in is required, but all users can access all functions. However, it is possible to set up the configuration to make it necessary to log in for certain user operations.

The access control system in Ethiris can, besides using internal user and user group definitions, also be based on Windows users and user groups. There are several different user operations in Ethiris, and each one can be connected to an Ethiris or Windows user group. Examples of user operations are *View live video from camera*, *Manual recording,* and *Show player in client*. If, e.g., *View live video from camera* is connected to a Windows user group, the user has to log in as a Windows user who is a member of that Windows user group, to get to see live video.

When you select the Log in… menu item, a dialog is displayed, see *Figure 2.32*.
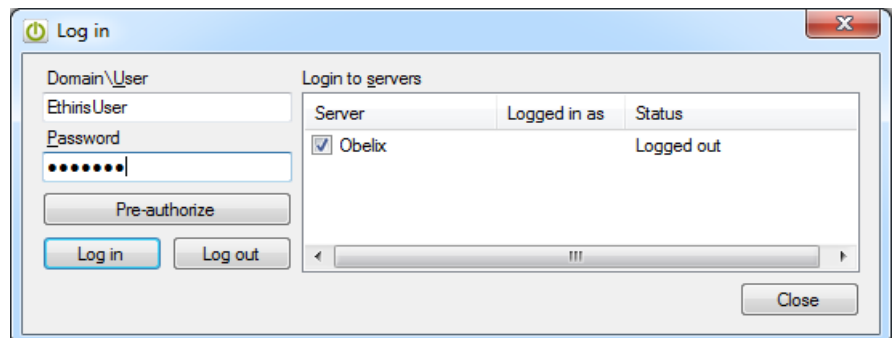
Figure 2.33 Log in dialog.

Enter the user name and password for a valid Ethiris user or Windows user and click the *Log in* button. You can log in to several Ethiris Servers at once by selecting them in the Log in to servers list.

When a user is logged in to Ethiris, this is indicated in the corresponding tool button in the main menu toolbar. The Log in tool button is displayed in green color. When no user is logged in, the color is red to indicate a possibly restricted state.

The button *Pre-authorize* is used when double log in is required. When pre-authorization is defined, a user with pre-authorization privileges has to first log in by the *Pre-authorize* button before a regular user can log in by the *Log in* button.
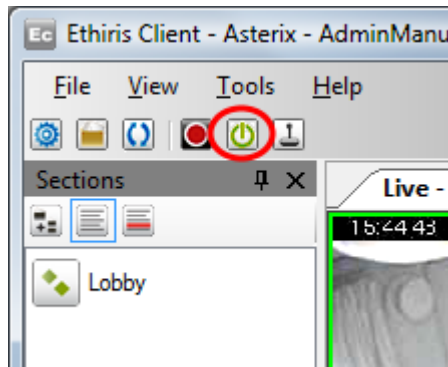
Figure 2.34 User logged in is indicated with a green log in tool button.

When a user is logged in, you can see which user it is by selecting the Log in menu item again. In the Log in to servers list, the name is displayed, see *Figure 2.35*.
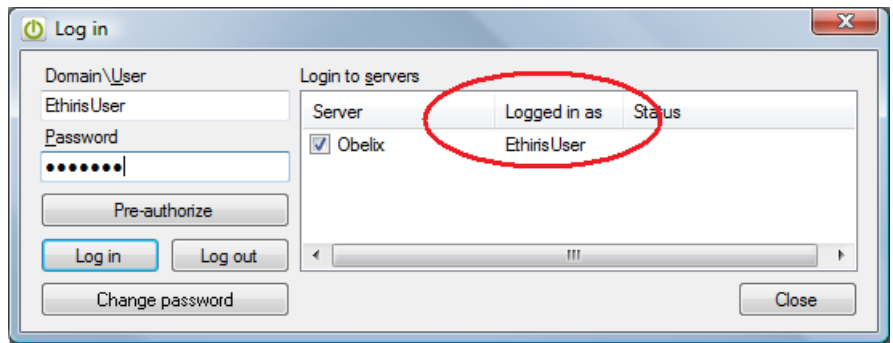
Figure 2.35 Log in dialog displaying the currently logged in user.

Click the *Log out* button to log out. This can be useful if you have to leave your computer but do not want to close Ethiris Client and, at the same time, do not want anyone else to access your Ethiris system.

If you are logged in as an Ethiris user, you can also change your password in this dialog by clicking the *Change password* button. A new dialog is shown as in *Figure 2.36*.
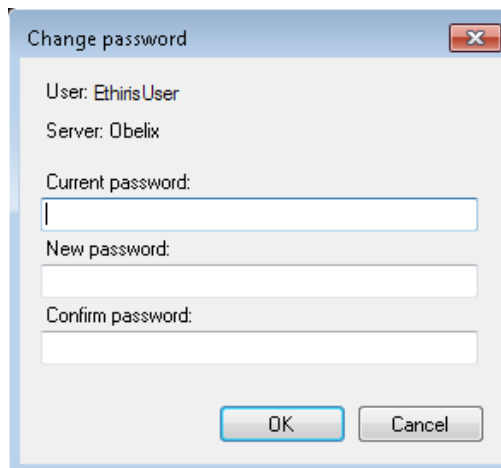
Figure 2.36 The Change password dialog.

To change your password, you must enter your current password under *Current password* and then enter your new password twice under *New password* and *Confirm password*.

Create shortcut to this configuration... creates a shortcut that can be used at a later time to start Ethiris Client with the current configuration loaded.

Add this configuration as favorite... will open the *Add configuration as favorite* dialog.
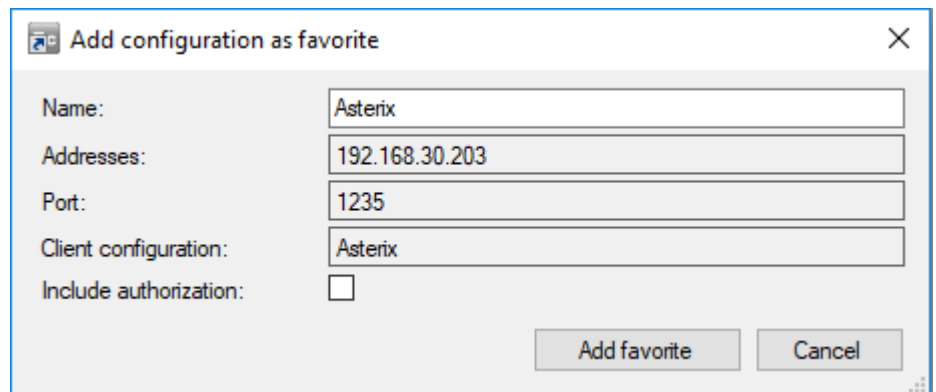
Figure 2.37 The Add configuration as favorite dialog.

You can give the favorite configuration a name of your choice. If you don't, the name of the client configuration will be used as the name of the favorite configuration.

If you want to include authorization in the favorite configuration, check the box *Include authorization,* and enter credentials. Then click the *Add favorite* button. You can only add the same configuration as a favorite once.

Exit is used for closing Ethiris Client. This can also be done by clicking the close button in the upper right corner of Ethiris Client.

2.2.3 View menu
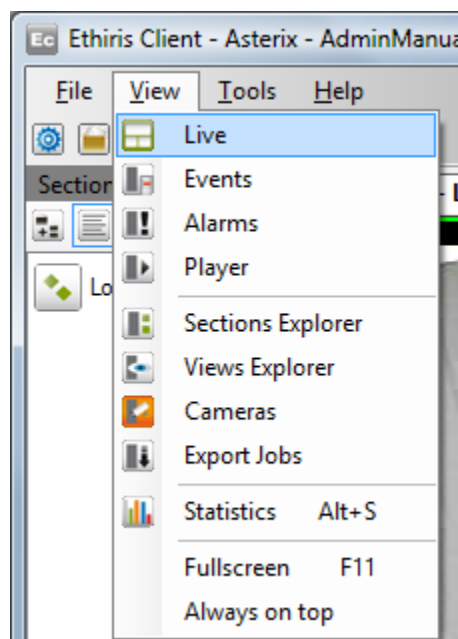
Figure 2.38 The View menu in Ethiris Client.

The View menu is entirely for opening various windows. If the selected window is already open, it receives focus, and if it is part of a tab group, the corresponding tab is selected, so the window becomes visible.

Live open the *Default Live panel*.

Events open the *Events panel*.

Alarms open the *Alarms panel*.

Player opens the *Player panel*.

Sections Explorer opens the *Sections Explorer* tool window.

Views Explorer opens the *Views Explorer* tool window.

Cameras open the *Cameras* tool window.

Export Jobs opens the *Export Jobs* tool window.

Statistics opens the *Statistics* dialog. This window displays the current frame rate from the cameras that are currently displayed in the client. For each camera, it is also displayed how many views the camera is currently part of, as well as the resolution and compression method of the video stream. By ticking Show all cameras, all cameras which are part of the client configuration will be displayed in the statistics list regardless of whether they are displayed in the client or not.
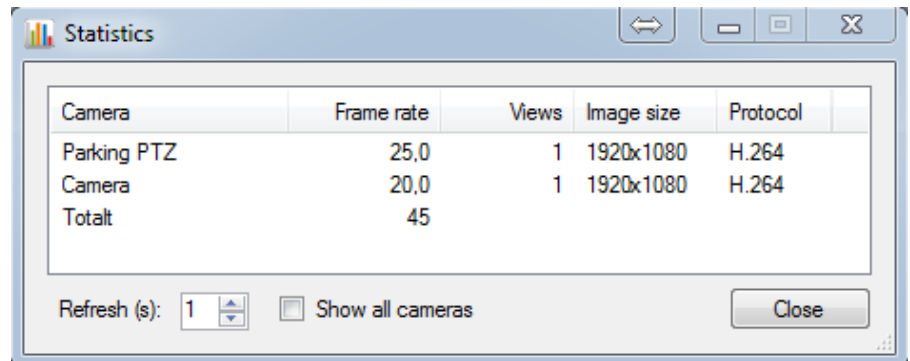
Figure 2.39 The Statistics dialog displays the current frame rate from the cameras.

Fullscreen toggles display mode for Ethiris main window between fullscreen (the window is displayed without title bar and borders) and normal mode. Using settings in the client configuration, this menu item can be hidden, and hence it is not possible to change this setting from the client.

Always on top toggles the always on top mode for the client's main window and all other windows opened from the client. The always-on-top means that all windows from Ethiris Client will be placed on top of all other windows on the desktop. Using settings in the client configuration, this menu item can be hidden, and hence it is not possible to change this setting from the client.

2.2.4 Tools menu
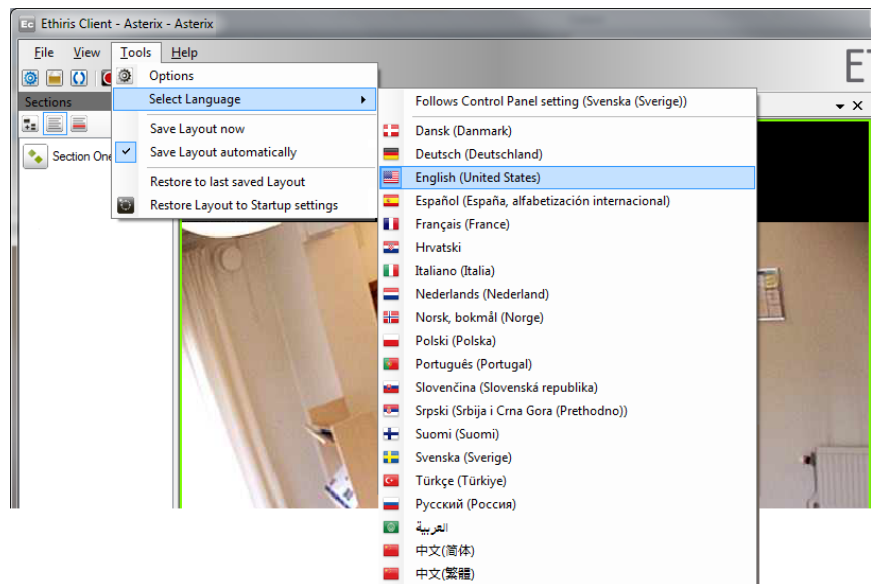
Figure 2.40 The Tools menu in Ethiris Client.

Options open the *Options* dialog.
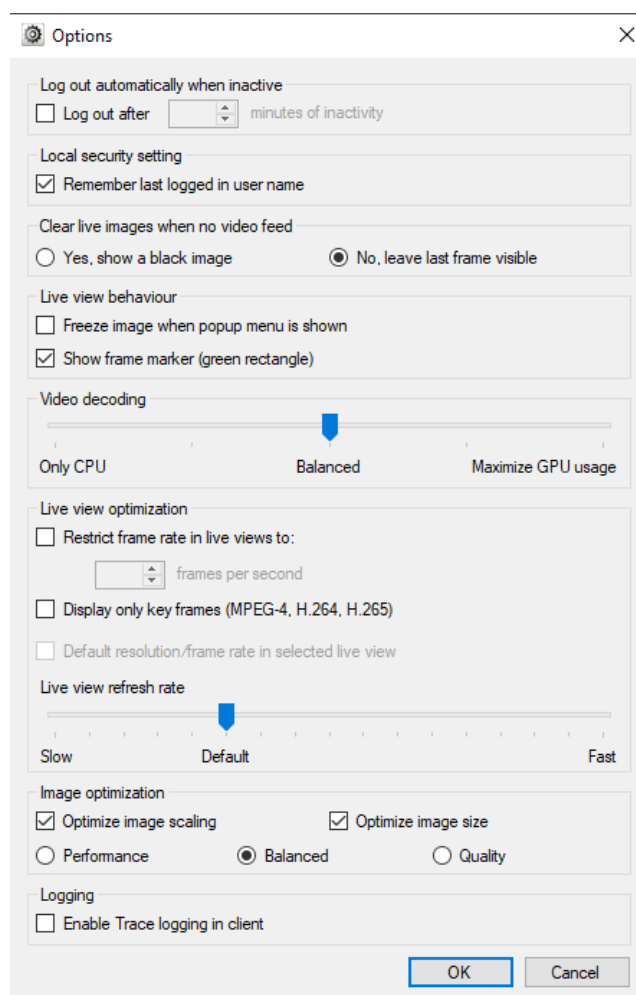
Figure 2.41 The Options dialog.

Log out automatically when inactive

If *Log out after XX minutes* of inactivity is checked, *Ethiris Client* will log out the currently logged on user if no interaction has taken place for the specified number of minutes.

Local security setting

If *Remember last logged in user name* is checked, Ethiris will suggest the last successfully logged in user name the next time the log on dialog is opened.

Clear live images when no video feed

If allowed in the configuration, it is possible to select whether or not to clear the camera image and instead display a black image when for some reason, it is not possible to display live video in a camera view.

If *Yes, show a black image* is selected, a black image will be shown in the case of a camera communication error, lack of privileges to show live video, etc.

If *No, leave last frame visible* is selected, the last received frame from the camera will remain visible if a live video cannot or is not allowed to be shown.

The administrator can force a specific setting when configuring the client configuration in *Ethiris Admin*, and in that case, it is not possible to change the setting here.

Live view behavior

Freeze image when popup menu is shown means that when you right-click, in a camera view displaying live video, for popping up the context menu, the current image will freeze. It is the same function as when selecting the Freeze image (Alt-F) menu item in the popup menu. As a default, this option is not selected which means that live video continues even after you have brought up the popup menu.

*Show frame marker (green rectangle)* means that a green rectangle always will mark the selected camera view. There is always one camera view selected and hence marked by a green rectangle. By unchecking this, the green rectangle will not be shown.

Video decoding

From version 11.2, *Ethiris Client* supports hardware decoding of video, and here you select how much of the GPU to be used for this.

The steps start with *Only CPU*, 0% GPU, *Balanced*, 50%, and *Maximize GPU usage* at 95%, in between is 25% and 75%.

The default is *Balanced* unless *Ethiris Client* is run on an NVR-1, then it is *Only CPU.*

Ethiris Client will automatically select which cameras are suitable for GPU and CPU to reach the selected level. In most cases, this will mean that the same hardware will get a boost in performance, and more cameras or cameras with a higher framerate will perform much better.

To be able to use hardware decoding, a license of at least Advanced level is needed. Together with a compatible graphics card. We recommend Nvidia GTX 1050/1650 since a more expensive card gives no noticeable improvement.

Live view optimization

Restrict frame rate in live views to provide the possibility to limit the frame rate for images sent from cameras on certain occasions. The purpose of this option is to decrease the load of the client and thus increase performance. A required pre-condition for this option to have any effect is that the cameras send images in the format M-JPEG. In this case, the camera manufacturer does not matter, but any camera that sends images in M-JPEG will be restricted in this way. The effect will be that Ethiris Server makes sure to deliver just the number of frames per second for the cameras that are currently displayed in the client.

Display only key-frames (MPEG-4, H.264, H.265) means that for the cameras currently displayed in the client, that send images in MPEG-4, H.264 or H.265, *Ethiris Server* will only send so-called key frames. A key frame is a complete image that is sent in a MPEG-4, H.264, or H.265 video stream at a certain interval. Usually, this occurs once or twice each second.

Default resolution/frame rate in selected live view means that, regardless if any of the two options described above are selected or not, the currently selected camera view (has a green frame) will display video at the full frame rate and full resolution as specified for each camera in *Ethiris Admin*.

Live view refresh rate. With this setting, you define the max refresh rate. The default is to redraw the live view about 60 times per second. The live view is only redrawn if a new frame has arrived from any camera currently being displayed in the view. A higher setting might be needed if you are using cameras with high framerate, and you want to achieve smoothest possible live video. A too high setting might make the experience worse. In that case, lower the setting until you get smooth video again.

Image optimization

Optimize image scaling means that scaling of images, to make them fit into their camera view, will be performed by the CPU as opposed to sending the images to the graphics card for scaling. It turns out that quite often, the PCI bus to the graphics card is a bottleneck, which has a negative effect on performance when it comes to displaying many frames per second in *Ethiris Client*.

Optimize image size means that *Ethiris Client* will decode images to the correct size (the largest size needed to display an image from a camera) directly in the decoder instead of handling all images in full original size (and then shrink them as they are displayed on the screen). This feature can dramatically increase performance on some computers.

Performance, Balanced, Quality simply means that decoding/scaling of images is done with different qualities. Higher quality means slightly lower performance and vice versa. Choose the quality/performance you desire.

Logging

Enable Trace logging in client means that a log file will be created where information about, above all, the communication between Ethiris Client and Ethiris Server is logged. The log file will be located in the currently logged in user's folder, e.g., *C:\Users\<user>\AppData\Local\Kentima AB\Ethiris*. The current log file is named *EthirisClient.log*. Each time the client is started, a copy of the current log file is created. There are up to three backlogs, and they are named *EthirisClient1.log, EthirisClient2.log,* and *EthirisClient3.log*.

Select Language. Ethiris Client supports several different languages.

Follow Control Panel setting means that if the language selected in the control panel (Windows) is one of the 20 available languages in Ethiris, that language will be used. In all other cases, the language will be English.

2.2.5 Help menu
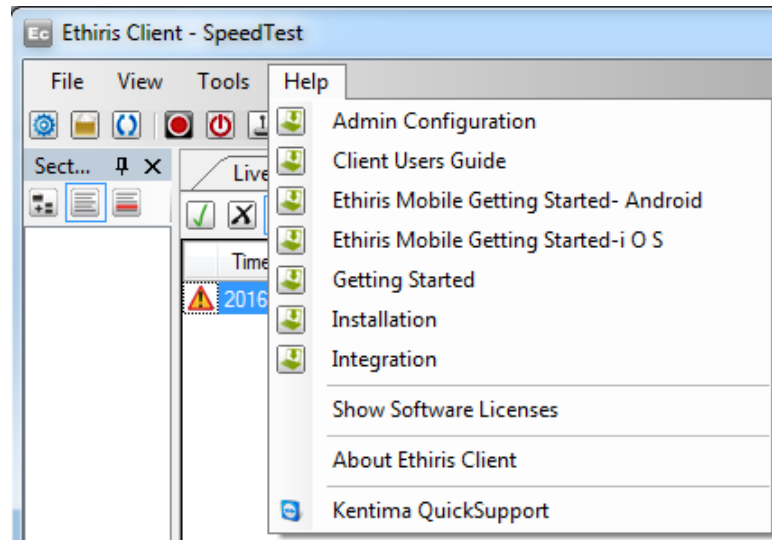
Figure 2.42 The Help menu in Ethiris Client.

For the moment, the Help menu contains three menu items plus possibly several manuals. The one who installs Ethiris can choose to install the manuals as pdf documents. The next two menu items will display the About Ethiris Client dialog, where one of them will also display the text of the software license. The last menu item, *Kentima QuickSupport,* will open a Teamviewer QuickSupport dialog.

About Ethiris Client opens the About dialog.
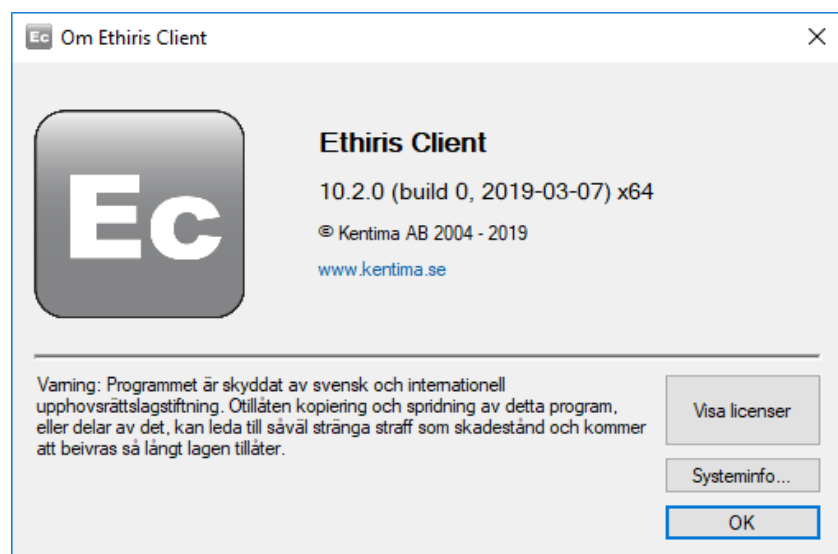
Figure 2.43 The About dialog.

The About dialog displays information on the version number of the current Ethiris installation. Click *Show Licenses* to display third party software licenses.

2.3 Main toolbar

2.3.1 Overview

Figure 2.44 The main toolbar in Ethiris Client.

In this section, we will have a quick look at the main toolbar. In practice, we are already done with this since the buttons on the toolbar are only shortcuts to various menu items. In fact, five out of six toolbar buttons can also be found in the File menu. For a more detailed description of the various functions, please read more in the section *File menu* on *page 2:17*.

Search for Ethiris servers

Use this button to open the *Search for Ethiris servers* dialog.

Open configuration

Use this button to open the *Client* configurations dialog.

Reload configuration

Manually reloads the current configuration. It is used when the configuration has changed while Ethiris Client is already started.

Manual event recording

Starts an event recording on the currently selected live camera.

Log in

Opens the Log in dialog.

Connect joystick

Tries to connect to a joystick connected to one of the USB ports on the client computer.

2.4 Sections Explorer

2.4.1 Overview

The Sections Explorer tool window is by default docked and pinned to the left edge of the main frame. This window contains a list of all the sections in the current configuration.

A section is a group of views, I/O buttons, and possibly sub-sections. The aim of a section is to separate (section) your system into smaller parts.

When you click a section, the content of the section is displayed in the *Views Explorer* tool window. The content of a section is defined in the configuration via Ethiris Admin. In the Views Explorer, only those items that have a corresponding button are displayed, i.e., views (that don't have the *Hide View in Client* checkbox checked in the configuration) and I/O buttons.

There are three different view settings in the Sections Explorer; Tree view, *List view,* and *Detailed view*. By default, the List view is selected, see *Figure 2.45*.
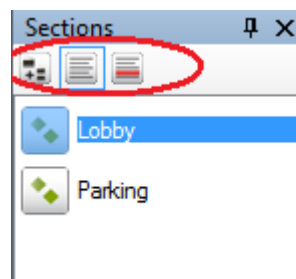
Figure 2.45 The Sections Explorer in Ethiris Client in List view layout. View layout buttons ringed in.

To change the layout, simply click the corresponding view button.

2.4.2 Tree view layout

Figure 2.46 The Sections Explorer in Ethiris Client in Tree view layout.

In *Tree view* layout mode, all sections and views are displayed at once (if every node is expanded). You can select views directly in the tree view and perhaps do not need the Views Explorer at all. The only thing missing is I/O buttons. These are only displayed in the Views Explorer.

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Clicking a view node in *Sections Explorer*, e.g., *Reception* in the example above affects the content of the *Default Live panel* or the *Player panel* depending on what document panel has focus. It has the same effect as if the corresponding button was clicked in the *Views Explorer*.

If neither a live panel nor the Player panel has focus, clicking a view node brings the *Default Live panel* on top, and the view is loaded into it.

In *Figure 2.47* below, the PTZ view node has been clicked. The Default Live panel displays the corresponding view within this case four live cameras. The tab of the Default Live panel displays the section name and the view name.
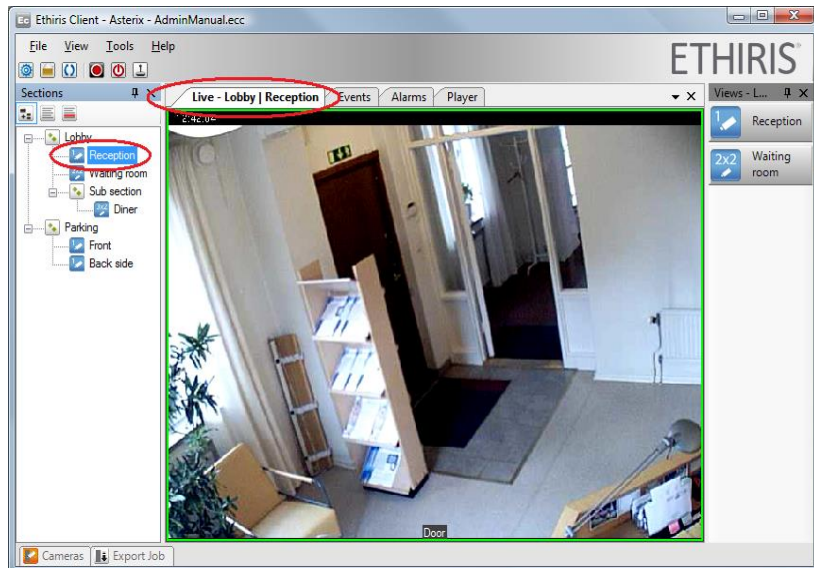
Figure 2.47 Clicking a view node loads that view in the Default Live panel.

2.4.3 List view layout

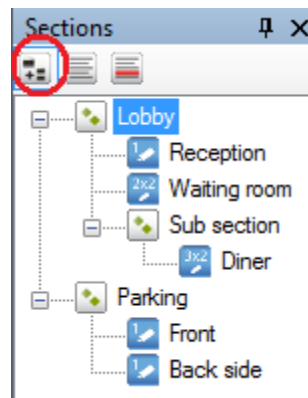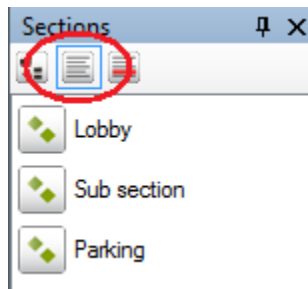*Figure 2.48 The Sections Explorer in Ethiris Client in List view layout.*

In List view layout mode, all sections are displayed at once in a list. It's a flat model as subsections are listed together with all other sections from top to bottom.

Note that no views are displayed; these are displayed in the Views Explorer. Clicking a section in the list changes the content of the Views Explorer.

2.4.4 Detailed view layout

Figure 2.49 The Sections Explorer in Ethiris Client in Detailed view layout.

This is essentially the same as List view. The only difference is that each section item is listed on one row with two columns. The column Description is not used right now but is reserved for future use.

Clicking a section row has the same effect as in List view.

2.5 Views Explorer

2.5.1 Overview

The Views Explorer is by default docked and pinned to the right edge of the main frame.

Figure 2.50 The Views Explorer in Ethiris Client with three view buttons and one I/O button.

This tool window displays buttons contained in the currently selected section. The buttons are usually connected to a view. Clicking such a view button opens the view in either a live panel or the player panel, depending on what panel has focus. It has the same effect as clicking the view node in the Sections Explorer tree view, see *Tree view layout* on *page 2:29*.

Another type of button that can be displayed in the Views Explorer is an I/O button. An I/O button is connected to a Boolean signal in Ethiris Server's data store. This type of button can be very powerful as it can be connected to virtually any function in the system and even be used for executing script in Ethiris Server. To learn more about I/O buttons and script, please see the *Admin - Configuration for Ethiris* manual and the *Getting Started with Ethiris* manual.
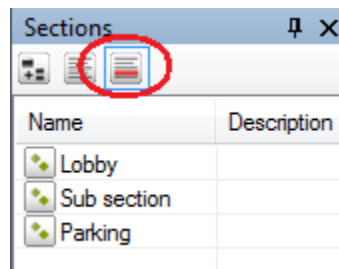
View layout

A View is a preconfigured layout with 1 – 64 camera views. The layout can consist of 1 - 8 rows and 1 – 8 columns of camera views. Furthermore, each camera view can span several rows and columns. The example below is from Ethiris Admin, where the layout is configured. This view has 4 columns and 3 rows. The camera view in the lower right (red color) is based on 3 columns and 2 rows. (The red color indicates that this camera view is intended for so-called Hot spot viewing).
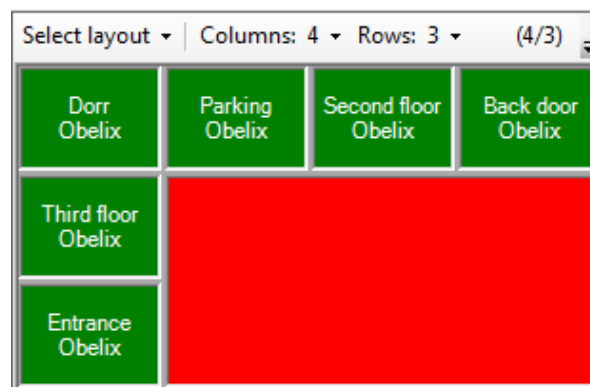
Figure 2.51 A view based on 4 columns and 3 rows.

Camera view

Each camera view can display several different things. The most common is live video from a pre-selected camera. In the example above there are six camera views for displaying live video (green color).

Other options for content in a camera view are *Hot spot*, *Round,* and *Background picture*. More information about the type of camera views can be found in the *Admin Configuration* manual.

Tooltip

In Ethiris Admin, you can define a tooltip for each view. Holding the mouse pointer over a view button in the Views Explorer displays the tooltip, see *Figure 2.52*.

Figure 2.52 Tooltips can be defined for the views.

Keyboard shortcuts

If you use an & sign before a letter in the name of buttons, that letter will become a keyboard shortcut. The underline will appear when you press the Alt key. In the example below in *Figure 2.53,* the first two buttons have keyboard shortcuts. The names in the configuration are entered as *V&iew one* and *&PTZ,* respectively.

Figure 2.53 Keyboard shortcuts for some of the view buttons.

Press *Alt+I* for selecting the *View one* view button and press *Alt+P* for selecting the *PTZ* view button. Note that keyboard shortcuts are not case sensitive.

2.5.2 Views Explorer menu

Right-clicking a view button brings up a popup menu.

Figure 2.54 Popup menu when right-clicking a view button.

The options are regarding where to display the view.

Show in Default Live Panel displays the selected view in the *Default Live panel*. No mystery here! This is what normally happens when you just left-click the view bu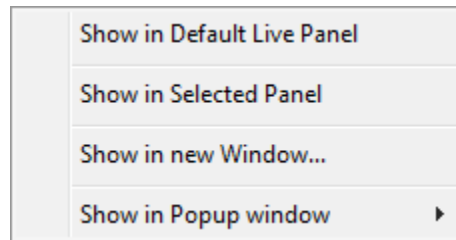tton. However, should, e.g., the Player panel or any other live panel have focus this is a way to force the view to be displayed in the live panel instead of in the panel with focus.

Show in Selected Panel displays the view in the panel that displays the camera view that currently has got focus (green frame). This is the default behavior when clicking a view button, but nowadays, you can hard-code a view button to a specific window. Then this menu item is useful. A view button that is hardcoded to display the view in a specific window is marked with a small square at the top right corner. See *Figure 2.55*. The actual binding is done in Ethiris Admin in the property panel for the view by selecting one of the windows in the list for *Clicked, show in*.

Figure 2.55 View button bound to a specific window.

Show in new Window will create a new floating live window and display the view in this window. The new window is a full-fledged document window and, as such, can be grouped together with the *Default Live panel* and the other panels. It can, of course, also be docked, etc. For more information about the various options for windows, see *Changing the layout* on *page 2:5*. An example of how this can look like is in *Figure 2.56* below. A new live window is always positioned in the center of the screen, with the size adjusted for a VGA camera (640 x 480 pixels).

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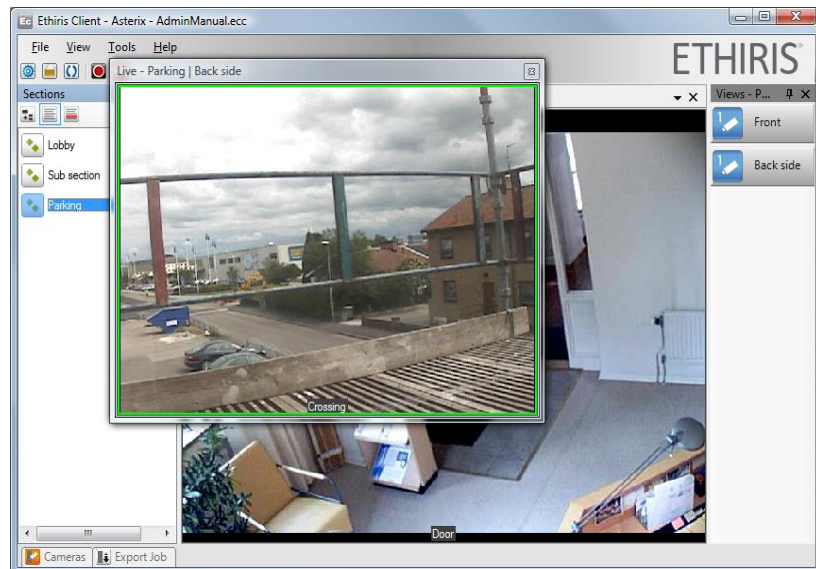
Figure 2.56 Show in new Window has been selected for the Back side view button.

Dragging the new floating window to the center tab group is possible, see *Figure 2.57*.
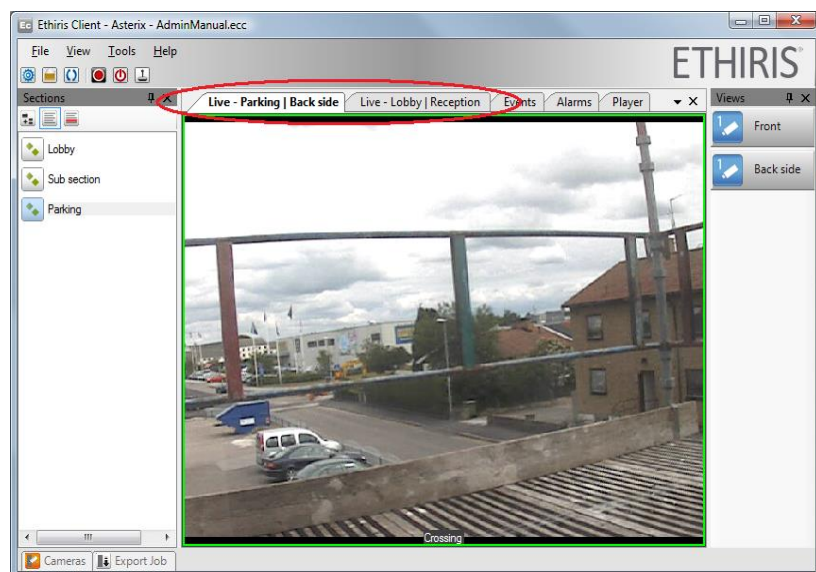
Figure 2.57 The new window is added to the tab group.

Now there are two different live panels.

Yet another option is to drag the new window to its own tab group, making it possible to view both live panels at the same time within the main frame.
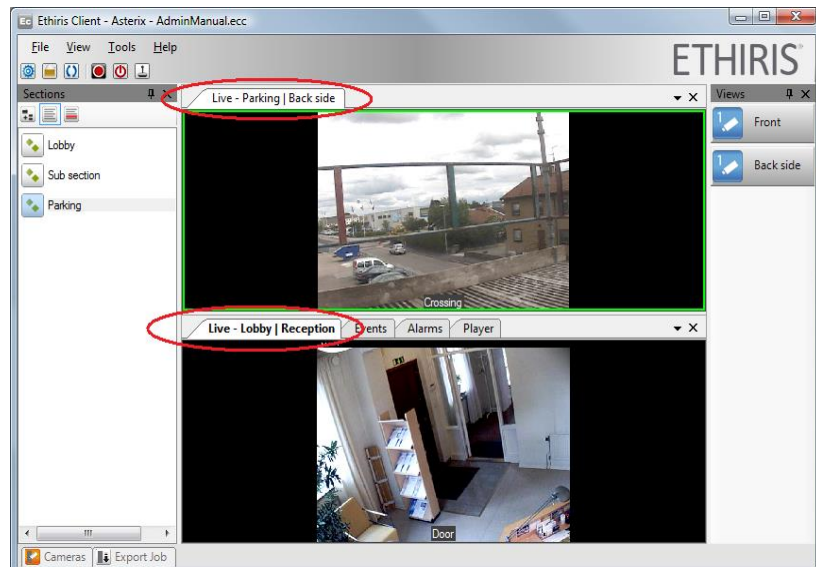
Figure 2.58 The new window in its own tab group.

The options are almost endless.

Show in Popup window displays a sub-menu with all available Popup windows. The Popup windows are pre-defined windows configured in Ethiris Admin. In the example below in *Figure 2.59,* there are two popup windows; *PopWin* and *AnotherPop*.
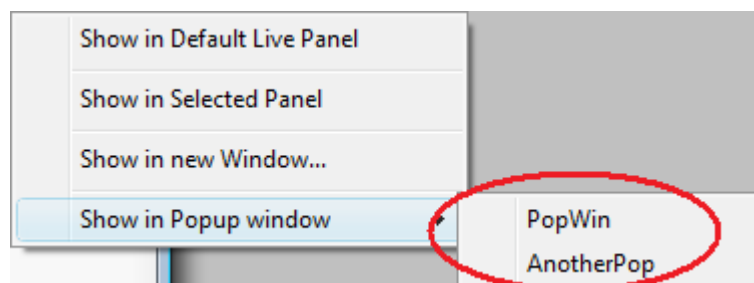
Figure 2.59 The Show in Popup window sub-menu.

In Ethiris Admin, you configure the name of the popup window and the size, position, monitor, and state, such as *centered* and *maximized*.

The difference between a Popup window and a new window is that you can define attributes like size and position for a popup window.

2.6 Live

2.6.1 Overview

As we have seen in the previous sections, live video can be viewed in several different windows. However, by default, when you start Ethiris Client, live video is displayed in the so-called *Default Live panel*. The Default Live panel is typically located in the center of the main frame as a tab in a tab group together with the other document windows; *Events*, *Alarms,* and *Player*.
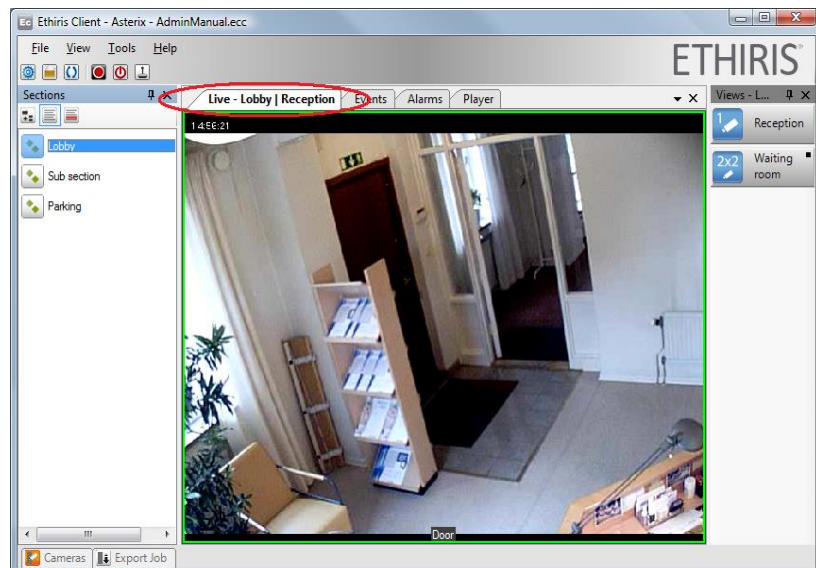
Figure 2.60 The Default Live panel, along with the other panels in a tab group.

The currently selected view is displayed in the live panel. The very first time a certain client configuration is opened, the first view in the first section is automatically selected. The following times the client is started, the previously selected view will be displayed.

2.6.2 Client view

Often a view has more than one camera view. You can select a camera view by clicking in one of them. The camera selected is indicated with a green frame. If any camera is selected, it is possible to start event recording by clicking the *Manual event recording* button in the main toolbar. In *Figure 2.61* below, the camera view at the bottom left (camera *Parking*) is selected.

Another way to select a camera view is to press the *space key* on the keyboard; the green border will then be drawn with dashes. In this mode, you can change the selected camera view with the arrow keys. Press the space key again to return to normal operation after selecting the camera view.

Live
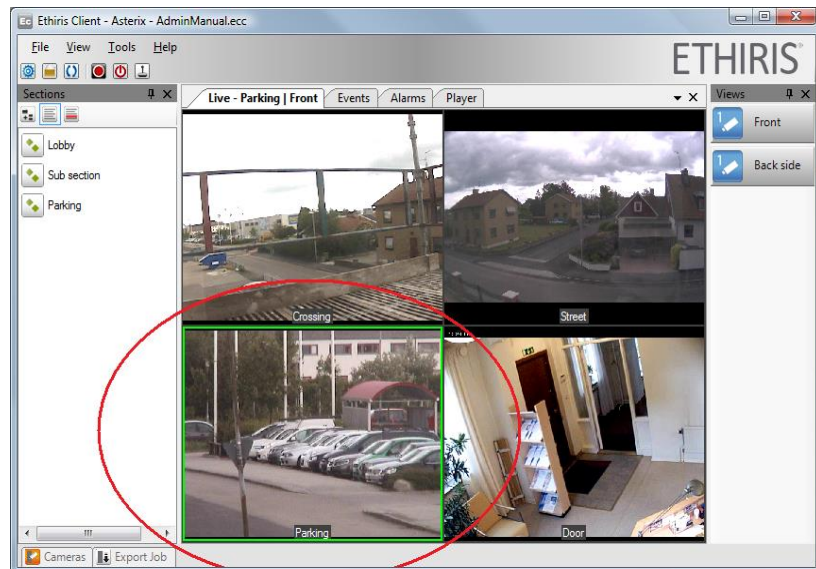
Figure 2.61 The Parking camera is selected.

Double-click the camera view required to get a full-frame.

If you quickly want to display video from a camera in the full viewing area, you can double-click the camera view required. The camera selected will then be displayed as if you had chosen a 1*1 view. Double-click once again to restore the camera view to its origin. To get the camera required in a separate window, you have to use the *Cameras* tool window. More about this later on.

2.6.3 Popup menu

Right-click in a camera view to display a popup menu. All these menu items might not be visible in your configuration.
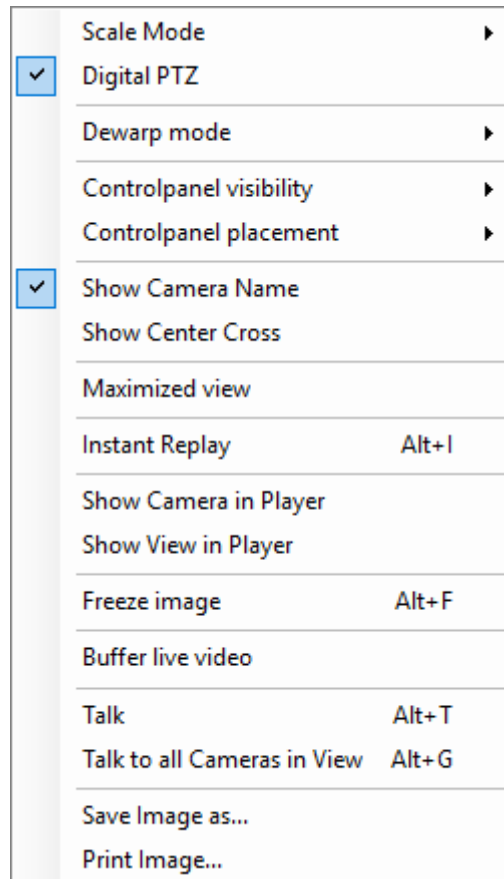
Figure 2.62 Popup menu for a camera view.

Scale Mode sets the scale mode in the current camera view to *Keep Aspect Ratio*, *Fill Displayarea,* or *Original size*. The current selection is indicated by a tick mark, see *Figure 2.63*.
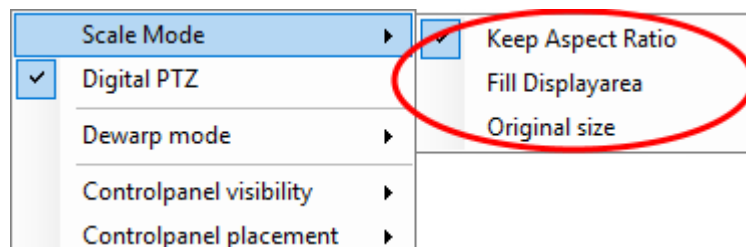
Figure 2.63 The Scale mode sub-menu.

Keep Aspect Ratio means that the frame fills out as much as possible of the camera view without distorting the proportions of the frame. This is the default mode of every camera view.

Fill Displayarea means that the frame is "dragged" out so that it covers the entire area of the camera view.

Original size means that the frame is displayed in the size it comes from the camera. This means that parts of the frame are cut if there is not enough room in the camera view.

Digital PTZ is a toggle menu meaning that it has two states; Either Digital PTZ is activated, or it is not. When Digital PTZ is activated, this is indicated by a tick mark, see *Figure 2.64*.
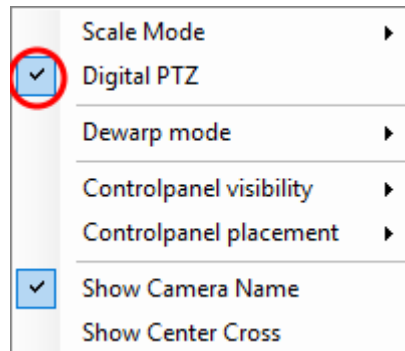
Figure 2.64 Digital PTZ active is indicated by the tick mark to the left in the menu.

For all cameras, Digital PTZ can be activated, but can only be inactivated for real PTZ cameras. An inactivated digital PTZ is often referred to as optical PTZ. PTZ stands for *Pan*, *Tilt,* and *Zoom*. Certain cameras' movement can be controlled remotely; these cameras are referred to as PTZ cameras.

When Digital PTZ is active, PTZ operations such as Pan, Tilt, and Zoom only affect the image on the client-side. No PTZ commands are conveyed to the actual camera.

For a more in-depth discussion of the various PTZ commands, see section

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PTZ on *page 2:53.*

Dewarp mode is only shown if the camera is a 360 camera that Ethiris supports, and you have a license level to allow the dewarping of 360 cameras and also that you are running the 64-bit version of the Ethiris Client.
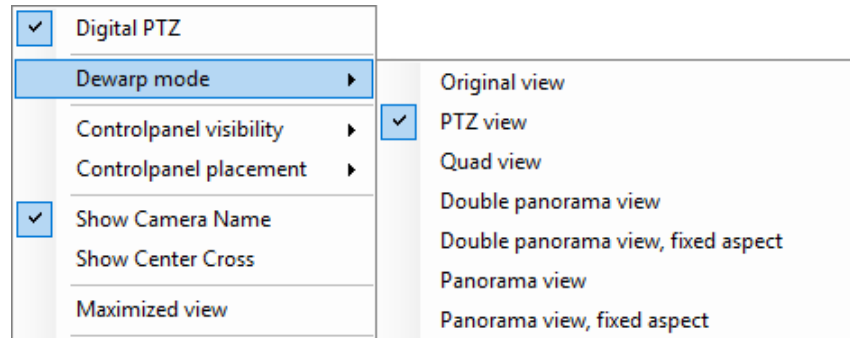
Figure 2.65 The Dewarp mode sub-menu.

Depending on how the 360 camera is mounted (*Ceiling, Wall,* or *Ground*), different menu options are displayed.

Original view shows the original 360 image from the camera.
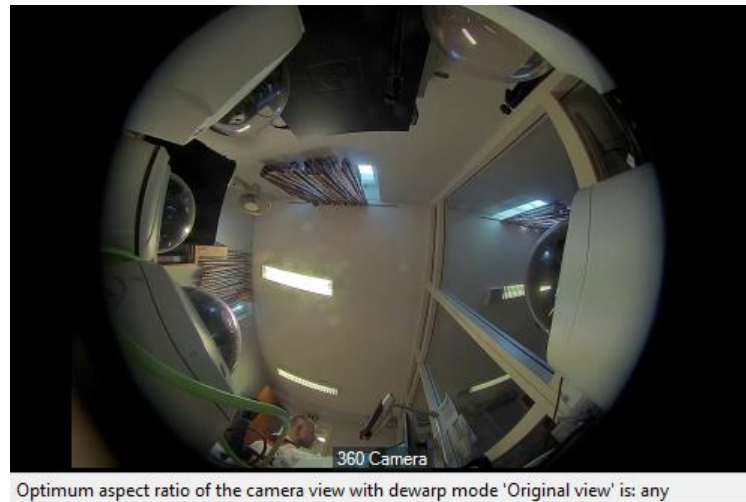
Figure 2.66 Original view from a 360 camera.

That the optimum aspect ratio for this dewarp mode is *any* means that the view will look good and that the aspect ratio in the image will remain the same regardless of what aspect ratio the destination camera view in the client has.

PTZ view shows a dewarped view from the camera. It is possible to pan, tilt, and zoom in the image.

Figure 2.67 PTZ view from a 360 camera.

That the optimum aspect ratio for this dewarp mode is *any* means that the view will look good and that the aspect ratio in the image will remain the same regardless of what aspect ratio the destination camera view in the client has. It might be, though, that the field of view will differ slightly due to the aspect ratio in the client.

Quad view shows four dewarped views from the camera in the same image. In each and one of the four views, you can pan, tilt, and zoom independently of the other views.

Figure 2.68 Quad view from a 360 camera.

That the optimum aspect ratio for this dewarp mode is *any* means that the view will look good and that the aspect ratio in the image will remain the same regardless of what aspect ratio the destination camera view in the client has. It might be, though, that the field of view will differ slightly due to the aspect ratio in the client.

Double panorama view shows two 180 degree images above each other in one image from the camera. You can pan in the image.

Figure 2.69 Double panorama view from a 360 camera.

The optimum aspect ratio for this dewarp mode is *wider than 4:3*. This is to be able to maintain a reasonable correct aspect ratio in the dewarped image.

Double panorama view, fixes aspect shows two 180 degree images above each other in one image from the camera. You can pan in the image.
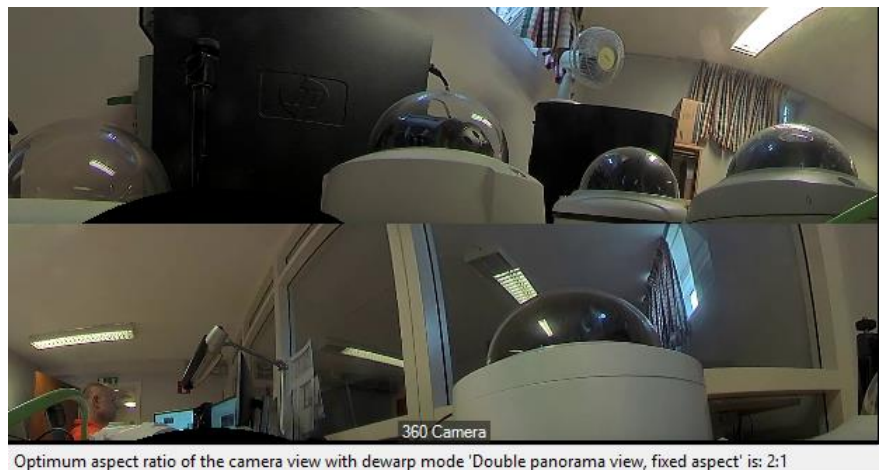
Figure 2.70 Double panorama view, fixed aspect from a 360 camera.

The optimum aspect ratio for this dewarp mode is *2:1.* If the camera view has another aspect ratio, there will be black bars above and under or to the left and right of the image.

Panorama view shows one 360 degree image from the camera. You can pan, tilt, and zoom in the image.
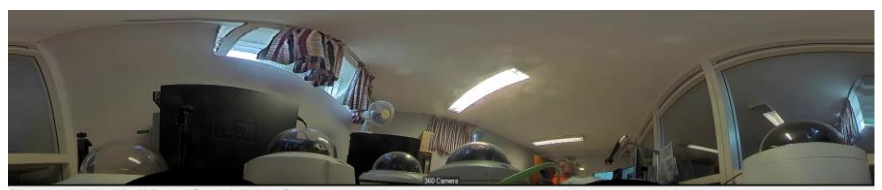
Figure 2.71 Panorama view from a 360 camera.

The optimum aspect ratio for this dewarp mode is *wider than 5:1*. This is to be able to maintain a reasonable correct aspect ratio in the dewarped image.

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Panorama view, fixed aspect shows one 360 degree image from the camera. You can pan, tilt, and zoom in the image.

Figure 2.72 Panorama view, fixed aspect from a 360 camera.

The optimum aspect ratio for this dewarp mode is *7.5:1.* If the camera view has another aspect ratio, there will be black bars above and under or to the left and right of the image.

The example below shows the menu for a camera that is mounted in position *Wall*.
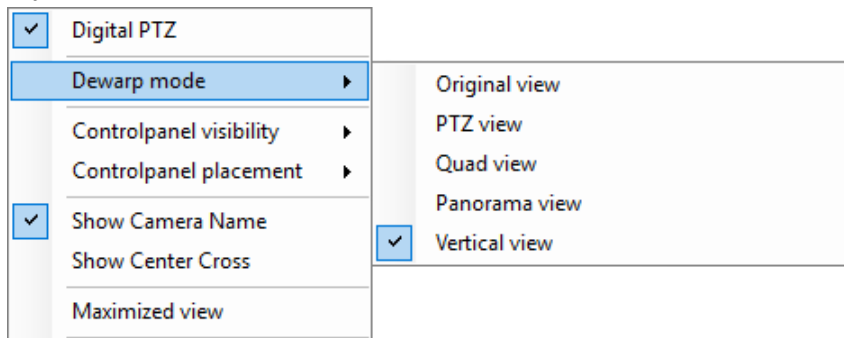
Figure 2.73 The Dewarp mode sub-menu for a wall-mounted camera.

Vertical view shows a standing 180 degree image from the camera. You can pan, tilt, and zoom in the image.

Figure 2.74 Vertical view from a 360 camera.

The optimum aspect ratio for this dewarp mode is *1:2.* If the camera view has another aspect ratio, there will be black bars above and under or to the left and right of the image.

The other dewarp modes of a wall-mounted camera are the same as for a ceiling och ground-mounted camera.

Controlpanel visibility contains a sub-menu with three options; *Always, On demand,* and *Never.* Read more about the Control panel in the section *Control panel* on *page 2:51.*
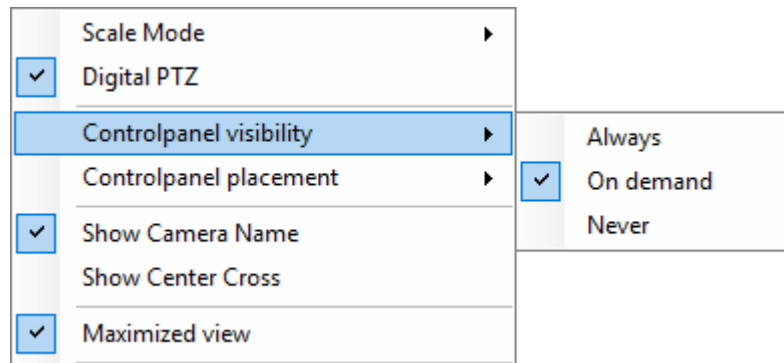
Figure 2.75 The Controlpanel visibility sub-menu.

Always means that the control panel will always be visible.

On demand means that the control panel usually is hidden, but when the user hovers the mouse in the bottom part of the camera view, the control panel will slide up and be visible. As soon as the mouse is moved out of the control panel, it will slide down and disappear.

Never simply means that the control panel will never be shown.

Controlpanel placement contains a sub-menu with two options; *Below videoframe* and *Overlays videoframe at bottom*.

Below videoframe means that the video frame is moved up so that the control panel has room beneath the video frame, see *Figure 2.76*.
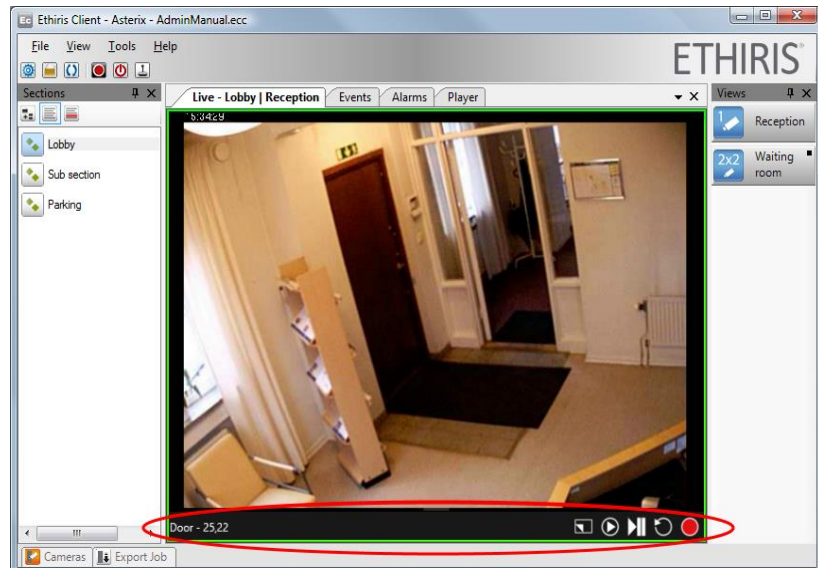
Figure 2.76 Control panel is placed below video frame.

Overlays videoframe at bottom means that the video frame is <u>not</u> moved up, but the control panel is placed on top of the image, see *Figure 2.77*.
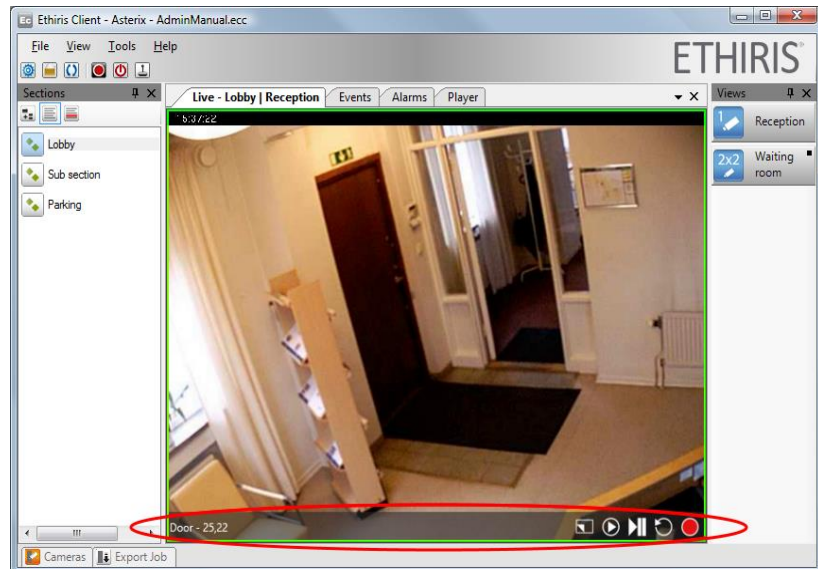
Figure 2.77 Control panel is placed over the video frame.

Show Camera Name shows/hides the camera name at the bottom of the video frame.

Show Center Cross shows/hides a cross in the center of the video frame. This may be helpful when operating a PTZ camera in Pan mode.
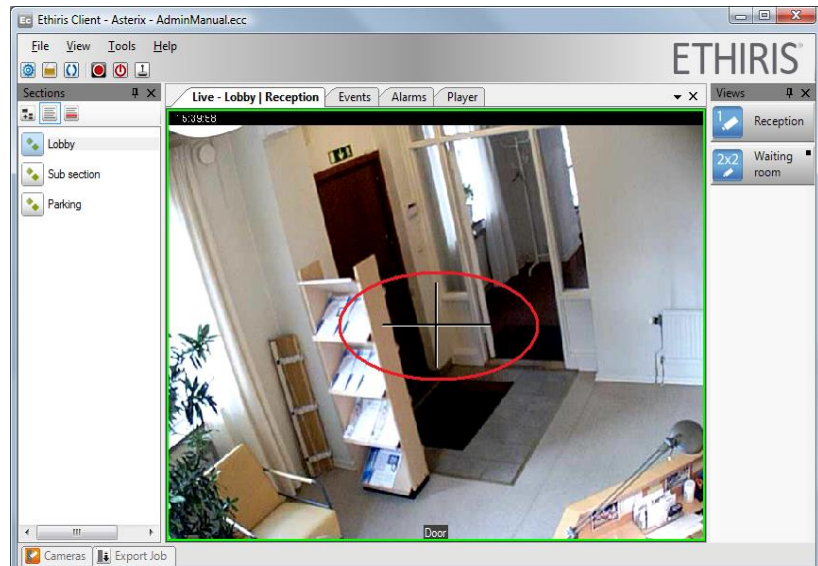
Figure 2.78 The Center cross is displayed.

Maximized view is only available when more than one camera view is in the view. Selecting the *Maximize view* menu item has the same effect as double-clicking the camera view. When active, the camera view is enlarged to the whole view area, and when inactivated, the view is restored to the original.

Instant Replay will show the current camera in a new Instant Replay window.
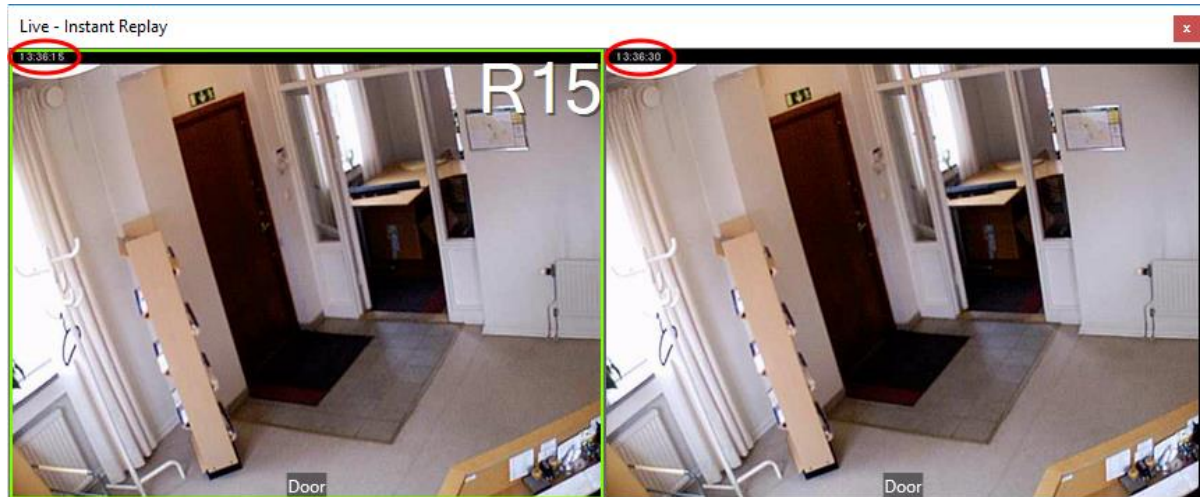
Figure 2.79 Instant Replay view.

An Instant Replay view looks like above. To the left, you see recorded video from the camera, in this case, 15s old. To the right, you see live video from the same camera. As you can see, the difference in time between the images is 15s.

By pressing *Alt + <left arrow>* on the keyboard while the left camera view has focus, you will increase the number of seconds back in time displayed. The maximum time back is the same as the setting for *Time before* for event recording for the camera.

Press *Alt + <right arrow>* to decrease the number of seconds back in time to display.

The number of seconds back in time jumps in steps. The following steps are available: 5, 10, 15, 30, 45, 60, 90, 120, 180, 240, 300, and so on in steps of 60s up to the maximum *Time before* seconds set for the camera.

Show Camera/View in player will load the camera, or the entire view the camera is in, directly in the video player.

Freeze is used to simply freeze the current frame. Live video is temporarily stopped until *Freeze* is released. When a camera is frozen, it is indicated by a flashing pause sign in the upper right corner of the image, see *Figure 2.80*. It is also indicated by a tick mark to the left of the *Freeze* menu item in the popup menu. The purpose with freeze is to have better control over which image you get when you want to save or print an image from live video.
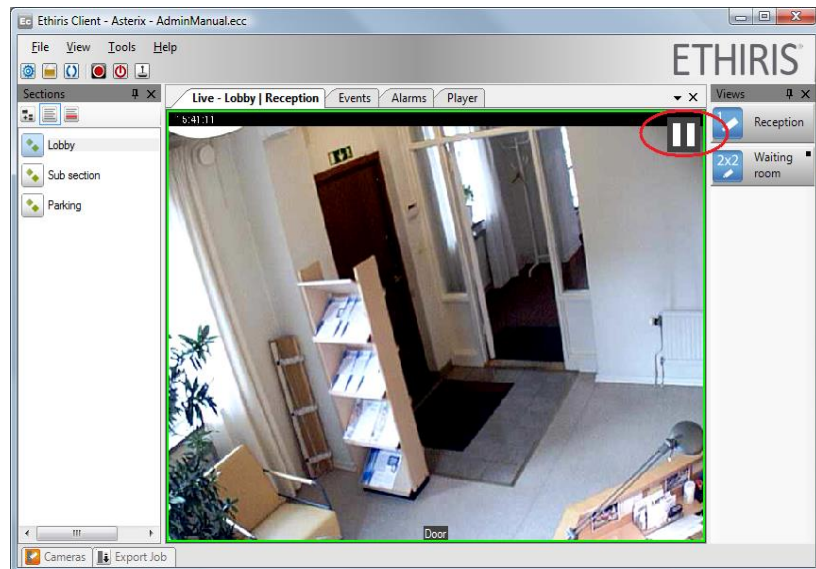
Figure 2.80 The camera is frozen.

Buffer live video enables buffering in the client to smooth playback for cameras that do not deliver video at exact time intervals or if network congestion makes the video arrive irregularly. This is only available for cameras that stream video over RTSP. See the *Admin - Configuration for Ethiris* manual for further description.

Talk activates/inactivates the microphone and sends audio to all audio devices connected to the selected camera.
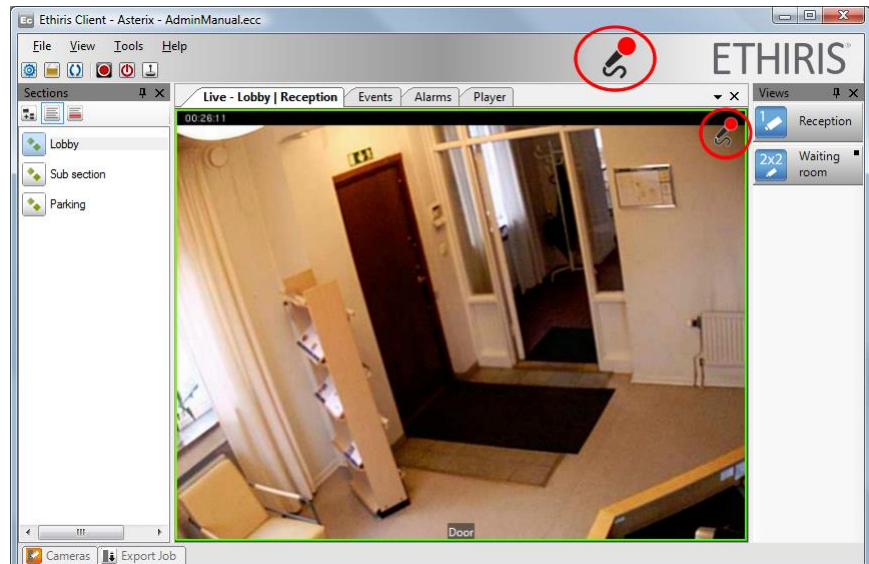
Figure 2.81 Talk activated for the camera.

The microphone icon in the camera view indicates that talking is active for this camera, and what you say will be sent to connected audio devices for this camera. The microphone icon to the left of the Ethiris logo indicates that the microphone itself is active. Double click on this icon will shut off the microphone and stop sending audio to all cameras in the configuration.

Talk to all Cameras in the View activates/inactivates the microphone and sends the audio to all cameras in the current view. Of course, only cameras that have audio devices connected to them. A microphone icon will blink in all camera views that have connected audio devices.

Save Image as… automatically freezes the live video if not done already and then opens a Save As dialog from which you can choose location and type of image. Available types are *jpg*, *bmp*, *gif*, *png,* and *tif*. The name of the image file is by default set to the camera's name and the current date and time, see *Figure 2.82*. The name can be changed. After saving the image, live video is resumed (the previous state is resumed). The image is saved without any *control objects* such as buttons or LEDs.
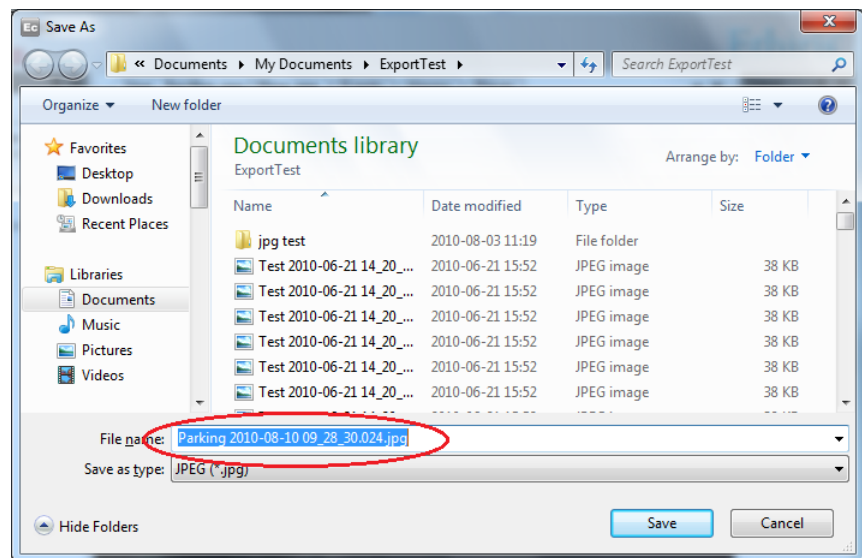
Figure 2.82 When saving an image, the file name is automatically generated.

Print Image… automatically freezes the live video if not done already and then opens a *printer dialog* where you choose which printer to use. After printing, the previous state of live video (frozen or not) is resumed. The image is printed without any *control objects* such as buttons or LEDs. Information of the camera name, when the frame was captured and when the image was printed, is also part of the printout.

2.6.4 Control panel

If required, the control panel can be displayed in each camera view. It contains the current camera's name and framerate for live views. In player views, the current timestamp is shown instead of the framerate.

I addition some buttons are displayed. These are the same functions that can be activated using the popup menu only easier accessed here.

When you hover the mouse over one of the buttons in the control panel, that button is marked by a white rectangle to indicate which button is to be clicked.

Depending on camera and configuration, more or less of these buttons might be visible.

Figure 2.83 The Control panel in detail in a live view.

From left to right, we have the following functions:

Show/hide overlay on cameras

Hides/shows overlay on cameras. This means that you can hide all items drawn on top of the camera image if it covers something in the image you want to see. What's hidden is the camera name, timestamp (in player views), and all interaction objects (buttons, LEDs, etc.). This button is shown both in live view and player views.

Show camera in player

Loads the current camera in the player. This button is only shown in live views.

Maximize/restore view

Is only visible if the view contains more than one camera view. Selecting the *Maximize view* menu item has the same effect as double-clicking the camera view. When active, the camera view is enlarged to the whole view area, and when inactivated, the view is restored to the original. This button is shown both in live view and player views.

Freeze image

Is used to simply freeze the current frame. Live video is temporarily stopped until *Freeze* is released. When a camera is frozen, it is indicated by a flashing pause sign in the upper right corner of the image, see *Figure 2.80*. It is also indicated by a tick mark to the left of the *Freeze* menu item in the popup menu. The purpose with freeze is to have better control over which image you get when you want to save or print an image from live video. This button is only shown in live views.

Instant replay

Shows the current camera in an instant replay window. This button is only shown in live views.

Talk

Activates/inactivates the microphone and sends the audio the then connected audio devices of the current camera. This button is only shown in live views.

Manual event recording

Starts an event recording for the current camera. This button is only shown in live views.

Search motion

Opens the dialogue *Search motion* for the current camera. This button is only shown in player views.

Export selection

Opens the dialogue *Export* with the current camera and the current timespan selected. This button is only shown in player views.

2.6.5 PTZ

In this section, we will have a look at the various PTZ functions available in Ethiris.

In general, when you talk about PTZ, you are thinking of what we call optical PTZ, i.e., controlling the movement and zooming of a motorized camera physically.

However, as more and more cameras are equipped with high-resolution megapixel CCD chips, digital PTZ becomes increasingly useful. Digital PTZ only affects the frames in Ethiris Client; it has no impact on the frames sent from the camera. This means that recorded video is unaffected by digital PTZ. It also means that other users possibly viewing live video from the same camera at another computer are also unaffected of the digital PTZ operations you perform on your local computer.

Optical PTZ, on the other hand, has a direct impact on the frames sent from the camera as these PTZ operations operate at the camera level. Panning a camera moves the actual camera to the right/left. This affects both recorded video and other users viewing live video from the same camera.

Digital PTZ

As mentioned earlier, all cameras can be operated in digital PTZ mode. This is probably only meaningful with megapixel cameras. Zooming in digitally on a low-resolution camera is of limited use.

Zooming

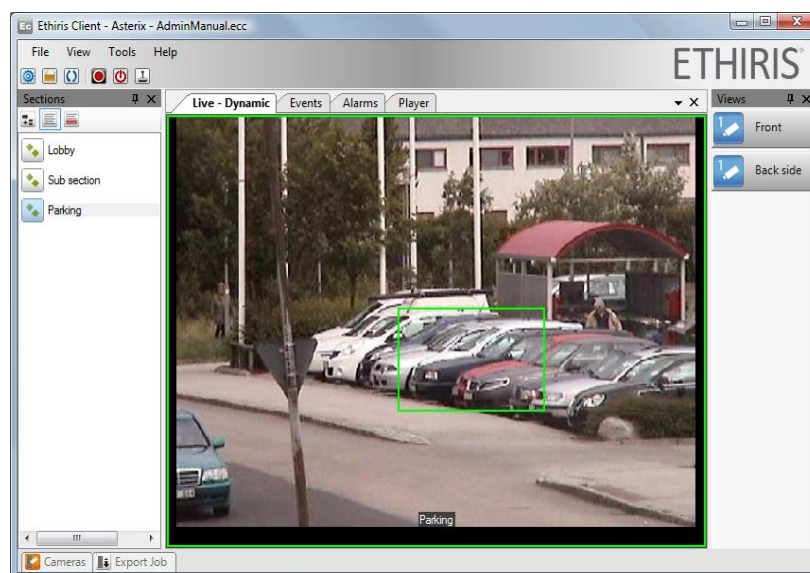Below is an example of zooming in digitally with a VGA resolution camera (640 x 480 pixels.

Figure 2.84 Digital zoom by drawing a rectangle.

After zooming in digitally on the white car, the result is a bit disappointing. It is just a bunch of big pixels.
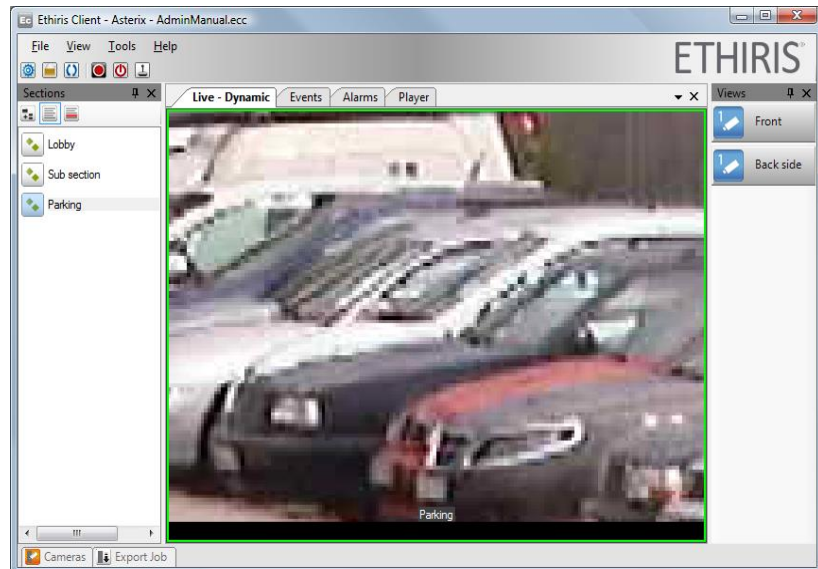
Figure 2.85 Big pixels after zooming in digitally.

Zoom in by scrolling the mouse scroll wheel forward. Zooming is performed around the mouse pointer, keeping that point of the frame visible. If you click and hold the middle mouse button and move the mouse forward, you will zoom in continuously.

Zoom out by scrolling the mouse scroll wheel backward. Zooming is performed around the mouse pointer, keeping that point of the frame visible. If you click and hold the middle mouse button and move the mouse backward, you will zoom out continuously.

Pan - Tilt

Panning and tilting digitally are only available when not the whole frame is visible in the camera view, otherwise, it is not meaningful. The point is to make visible parts of the image that you want to see.

Click in the image with the center mouse button to move the center of the frame to that point.

Draw a rectangle with the right mouse button to zoom in on that area.

Drag the image to the desired location by a click – hold – move – release operation with the left mouse button.

Optical PTZ

Optical PTZ is only available on real PTZ cameras.

Zooming

Below is a similar example of zooming, this time on a fence. This time we will zoom optically and see the vast difference in quality. The camera used this time is a Sony RZ50P with an optical zoom of 26x. The resolution is slightly higher, 704 x 576 pixels.
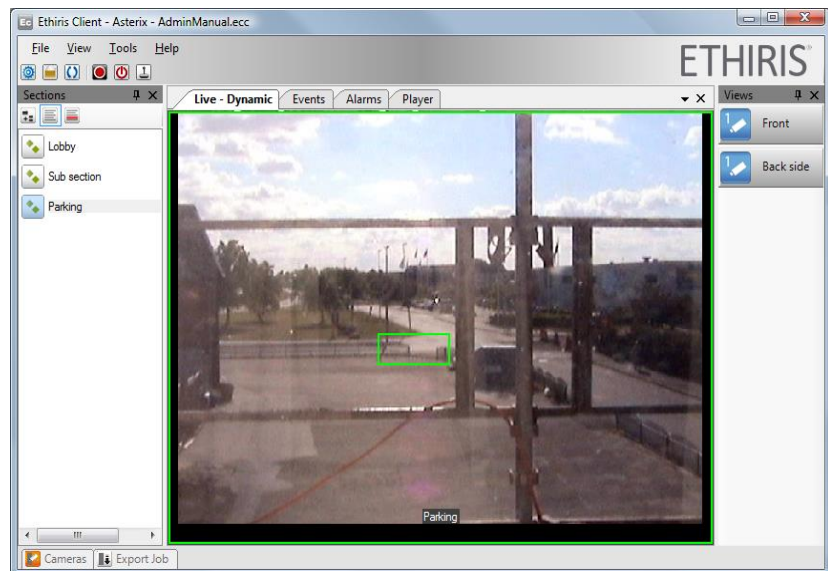
Figure 2.86 Optical zoom by drawing a rectangle.

After zooming in optically on the fence, the result is much more satisfying. The disadvantage, of course, is that you lose the overview, also in recorded video.
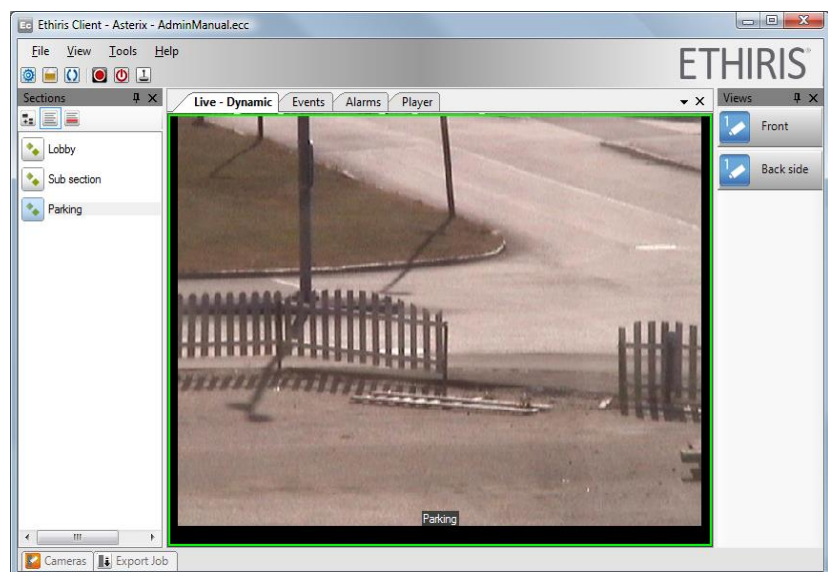
Figure 2.87 Optical zoom in provides good image quality.

When zooming optically, you have the same tools as when zooming digitally. You can f.i. zoom in and zoom out using the mouse scroll wheel.

You also can click and hold the middle mouse button, and while doing this move, the mouse upwards in the image to zoom in or move the mouse downwards in the image to zoom out. This will make the camera zoom in/out in a continuous way.

Pan - Tilt

Panning and tilting optically physically changes the camera's direction.

Click in the image with the middle mouse button to move the center of the frame to that point. You also can draw a rectangle with the right mouse button pressed to zoom in on that area. If the camera supports this functionality, it will pan, tilt, and zoom in on that area.

The idea is to click the left mouse button, and while holding it down, the camera moves in the direction towards the mouse pointer relative to the center of the frame. The camera stops moving when you release the mouse button. You can move the mouse pointer while holding the left mouse button down to change the direction and speed of the camera. The further from the frame center you hold the mouse pointer, the faster the camera moves.

To assist you in finding out where the center of the frame is, select Show Center Cross in the popup menu.

Show Center Cross to find the center of the frame.

2.6.6 Other types of camera views

So far, we have only explored normal live video viewing, i.e., the camera views contain a reference to a pre-determined camera. There are other types of camera views; Hotspot, Round, and Background picture.

Hotspot

The intention of a hot spot camera view is to display live video. The point is that which camera to display is not pre-determined, but can be controlled at runtime either by operator intervention and/or automatically when a specific event occurs in the system.

One common use of hotspot views is to have a larger camera view as a hotspot, and when the operator clicks on the smaller camera views, the live video will be displayed in the hotspot from the chosen camera.

The behavior of a hotspot camera view is determined at design time in Ethiris Admin. For a full description of the various settings, please see the *Admin Configuration* manual.

In *Figure 2.88,* you see the layout configuration of a view with a hotspot camera view in the bottom right corner.
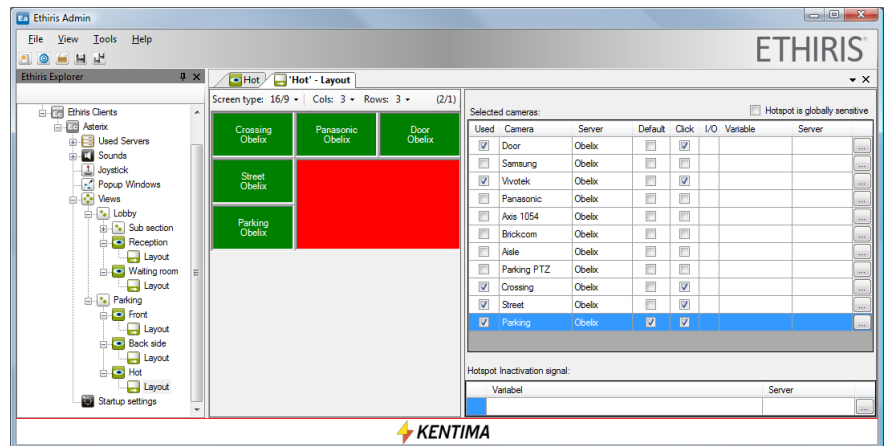
Figure 2.88 Configuration of a hot spot camera view in Ethiris Admin.

In Ethiris Client in live, it looks like in Figure 2.89.
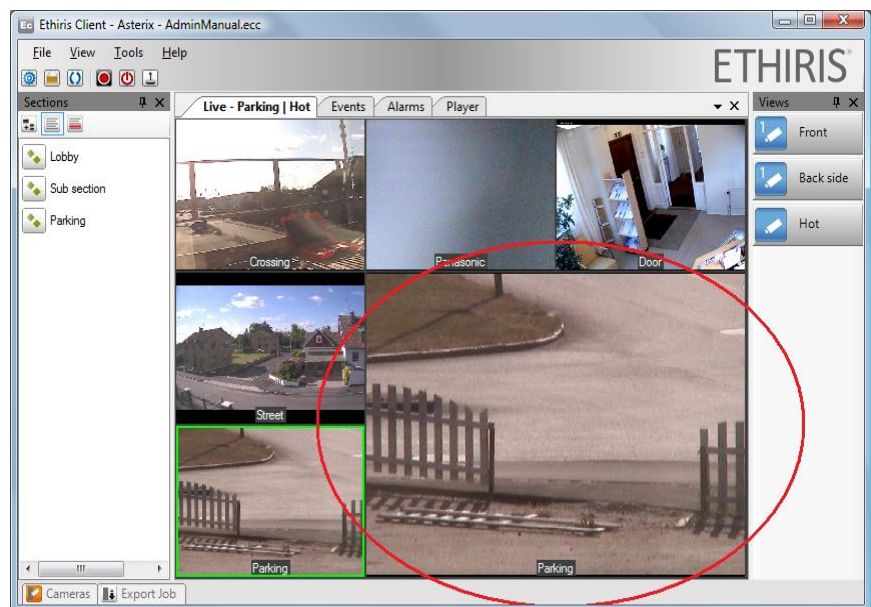
Figure 2.89 Hot spot camera view in live.

Clicking on the smaller camera views exchanges the camera in the hot spot camera view.

Another common use of the hot spot functionality is to automatically popup a live window on a specific event. E g a camera at the entrance of a building could be used for detecting motion, and then the system could popup a live window with live video from the entrance camera as soon as there is motion outside the door.

Again, for instructions on how to configure this kind of functionality, see the *Admin Configuration* manual.

Round

The intention of a round camera view is to display live video from several cameras, one at a time. In the Ethiris Admin configuration, you specify a list of cameras and a time interval. In Live in Ethiris Client, the camera is automatically exchanged according to the list with the specified interval.

Background picture

When you select the type *Background picture* for a camera view, you can insert any *bmp*, *gif*, *jpg,* or *png* image in the camera view. The purpose is usually to display some kind of map or situation plan.

Just a static image is not of much use. There are some objects that can be inserted on top of the image, such as buttons, texts, LEDs, cameras, images, and doors.

Buttons can be connected to any Boolean signal in Ethiris Server. It is just like an I/O button described in the section *Overview* on *page 2:33*.

Texts can be used to present various information, both static texts, and values from variables in Ethiris Server's data store.

LEDs are digital indicators with two states. They look like a small lamp where you can choose the colors representing on and off.

Cameras are symbols representing a live camera. Clicking a camera symbol has the same effect as clicking on a camera view displaying live video from the camera. In conjunction with a hot spot camera view, clicking on a camera symbol can display live video from the camera in the hot spot.

Images are used to display a static image.

Doors display the status of a door controlled by an access controller.

In the example below in *Figure 2.90,* four of the object types are represented.

The buttons are connected to different PTZ pre-sets. Clicking a button moves the PTZ camera to the corresponding pre-set position.

The text displays the number of times the vault has been opened the current day.

The LEDs become red whenever the corresponding camera records video.

Clicking the *camera symbols* opens up a popup live window on monitor 2 and displays live video from the camera.

These are just simple examples of what you can accomplish with the control objects in Ethiris Client.
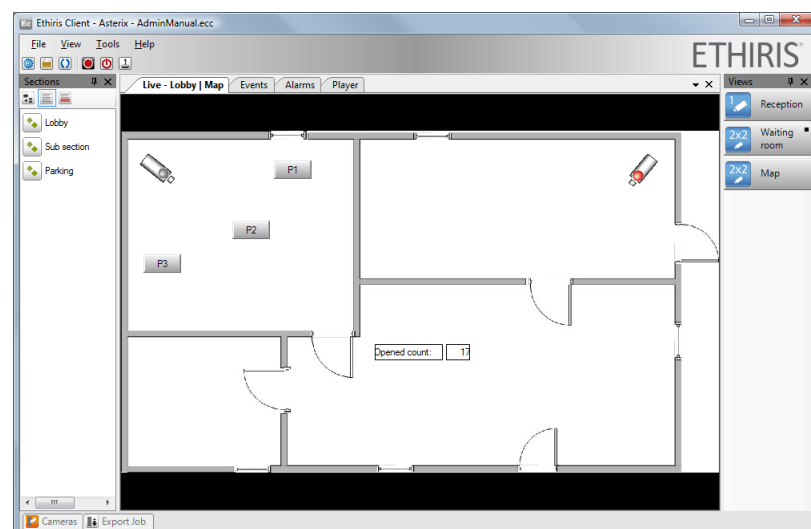

Figure 2.90 A background picture with some objects.

It is possible to insert control objects in camera views of any type, i.e., camera views for a pre-determined camera, rounds, and hot spot. In *Figure 2.91* below, there are all four kinds of camera views. Each one has some control objects, just for testing.

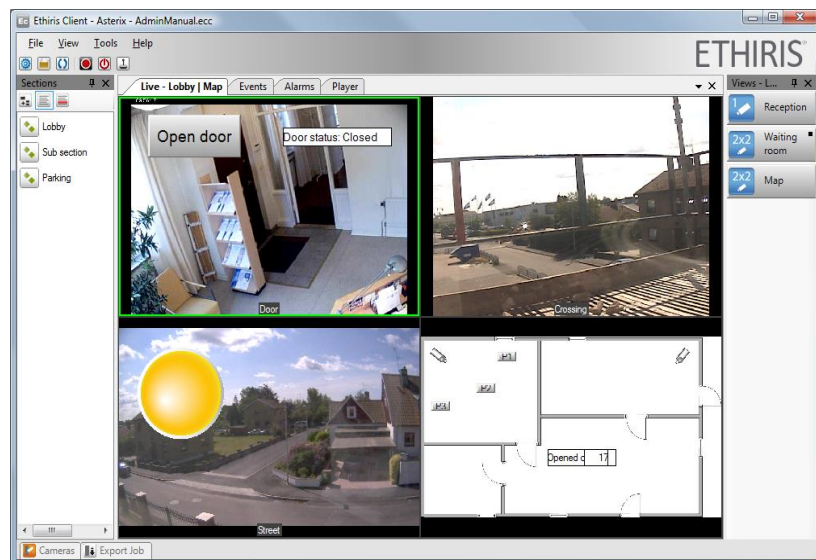*Figure 2.91 Control objects can be inserted in almost any type of camera view.*

Web page

When you select the type *Web page* for a camera view, you define the start page that will be loaded when the view is shown. Depending on the configuration, it can be allowed to navigate using links on the page that is shown.

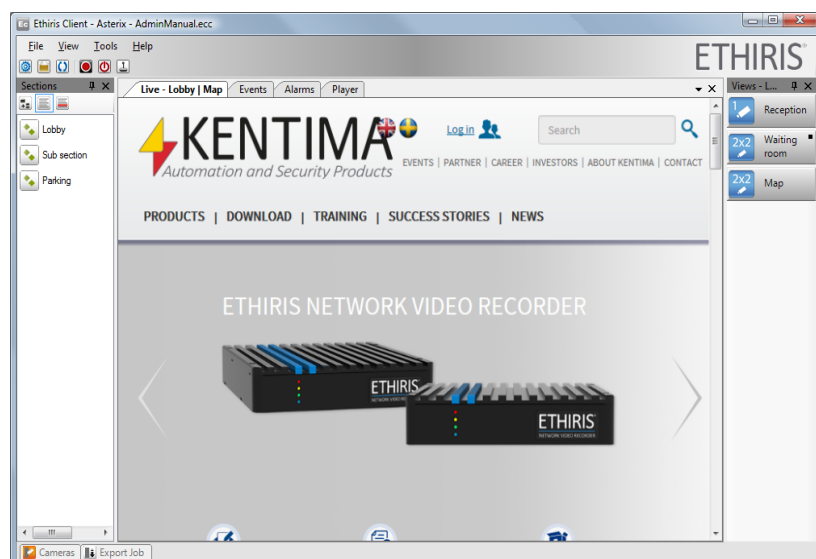It is not possible to put control objects on a web page.

Figure 2.92 Web page in a view.

2.7 Player

2.7.1 Overview

The Player panel is used for playback of recorded video.

There are two main parts in the Player; the *timelines* and the *camera views*. In *Figure 2.93,* the Player is loaded with a view of four cameras.
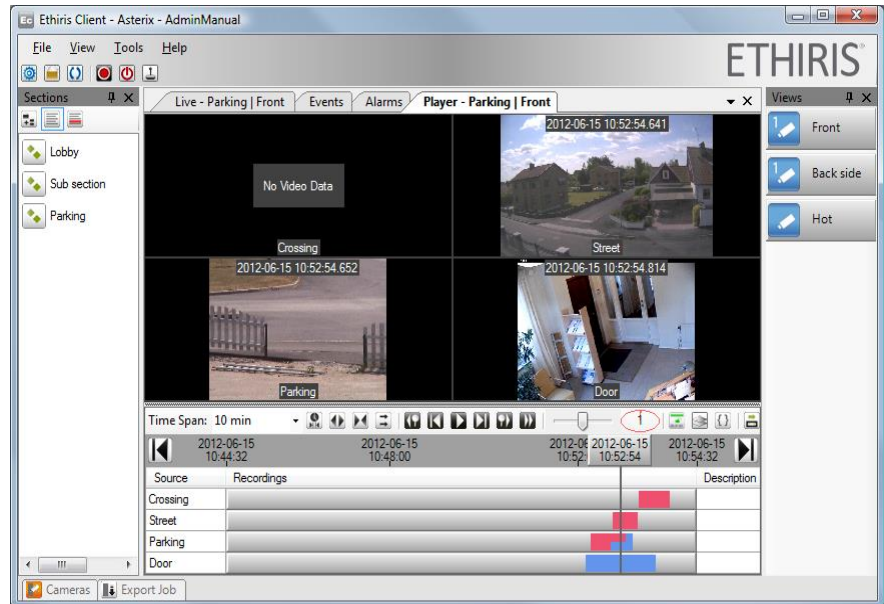
Figure 2.93 An example of the Player loaded with four cameras.

The timelines display information about recordings for each camera. Light grey color means no recording. Red means event recording, and blue means continuous recording. Both continuous recording and event recording can occur simultaneously. If we zoom in on the timelines, we can see that this has happened for the *Parking* camera in *Figure 2.94*.

Figure 2.94 Both continuous and event recording at the same time.

Hidden tool buttons

In case of insufficient width of the Ethiris Client to display all tool buttons in the Player, the buttons and possibly other controls at the far right will be hidden. Instead, a down arrow will appear, see *Figure 2.95*

Figure 2.95 Tool buttons will be hidden if the width is insufficient.

Click the down arrow to show the hidden controls.

Figure 2.96 Show hidden tool buttons by clicking the down arrow.
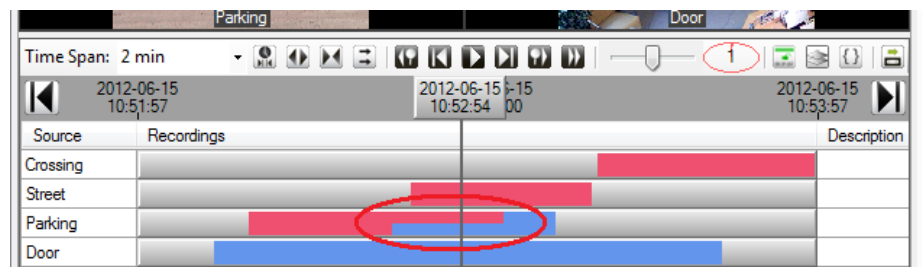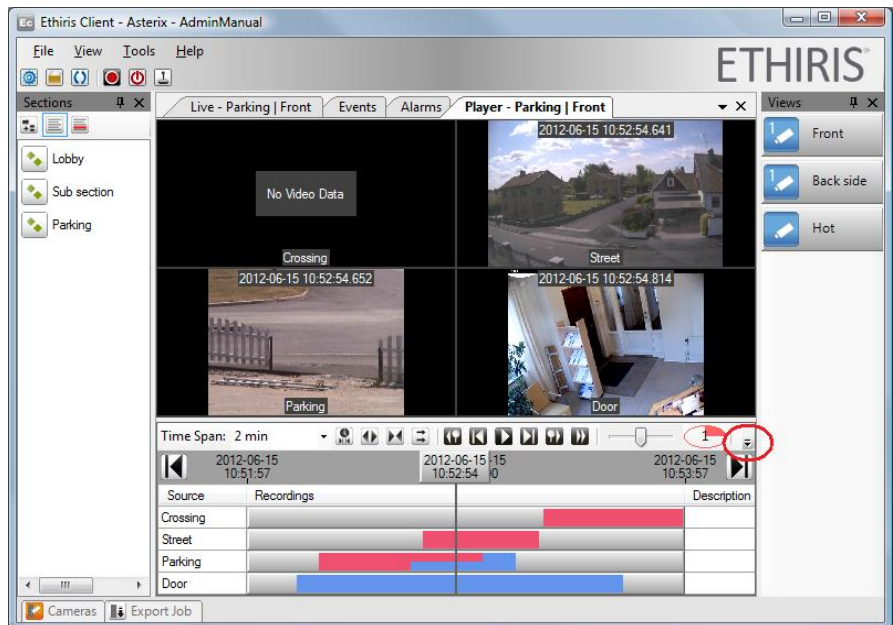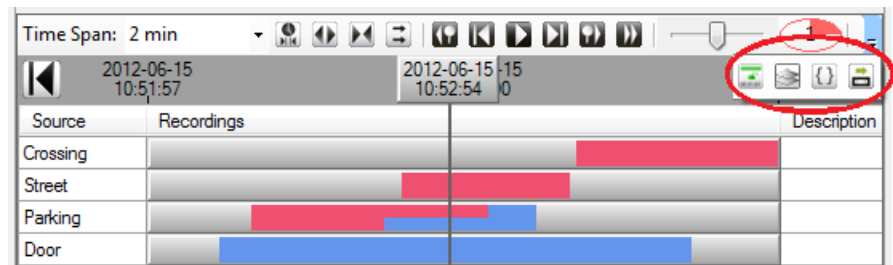
2.7.2 How to work with the Player

Working with the Player involves two steps. The first step is about selecting which cameras to load into the Player. The second step is about selecting an appropriate timespan for finding the relevant recorded video.

Select cameras

In the Player, all views are available just as they are in live. Simply click one of the view buttons in the *Views Explorer* tool window to load the cameras and the camera view layout into the Player.

In the current version of Ethiris, there is a limitation of a maximum of 64 cameras (16 cameras in the previous 32-bit version) simultaneously in the Player. Exceeding cameras are simply ignored and will not be visible in the Player.

Another way to select cameras into the Player is to use the *Cameras* tool window. In the Cameras tool window, you can select any desired cameras and then load them into the Player. We will have a good look at the *Cameras* tool window in the section *Cameras tool window* on *page 2:95*.

In *Figure 2.97,* you see an example where two cameras are selected in the *Cameras tool window*. After having selected desired cameras, click the ringed in button for loading the cameras into the player.
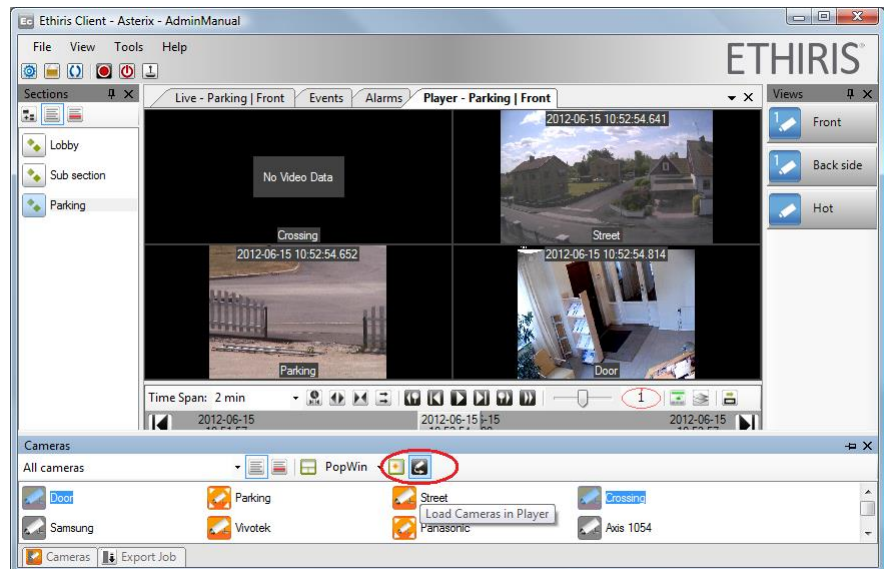
Figure 2.97 You can use the Cameras tool window for selecting cameras into the Player.

Set timespan

When you first enter the Player panel, the timespan is set to 30 minutes with the current time at the right end of the timelines. In Figure 2.98, the time was 11:21:33 on June 15, 2012. At the upper left (ringed in) is a selection list with different timespans from 10 minutes to 1 month. The 30 minutes option is automatically used.
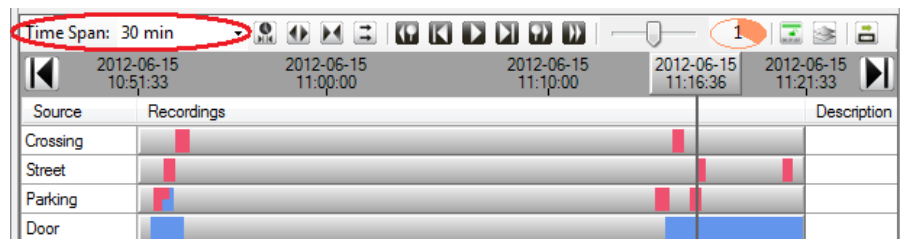
Figure 2.98 By default, the time span is set to 30 minutes.

Above the timelines are two timestamps, one at the start and one at the end. These indicate the start time and end time of the timelines. In this example, the start is at 10:51:33, and the end is at 11:21:33.

In the middle, there is a time ruler displaying the time for what is shown in the camera views. In this example, video from 11:16:36 is shown in the camera views.

Scroll timespan

At the edges of the time band, to the far left and far right, there are buttons for changing the current time span; see *Figure 2.99* where the buttons are ringed in.

Figure 2.99 Buttons for moving in the timespan.

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When you click, e.g., the left button, the timespan is changed to 30 minutes back in time. One click corresponds to the current time span, i.e., the timestamp that was to the left is now to the right instead.
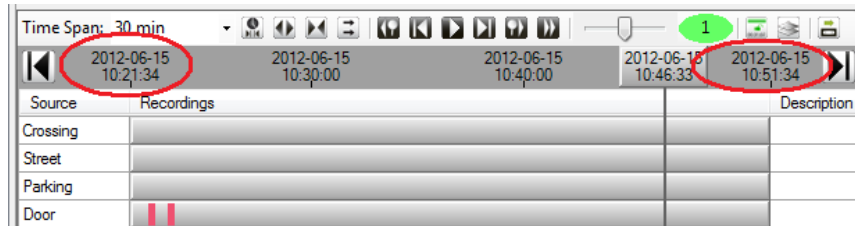
Figure 2.100 Scrolling to the left changes the start and end time of the timelines.

An alternative to using the buttons is to drag the dark grey area between the buttons, see ringed in area in *Figure 2.101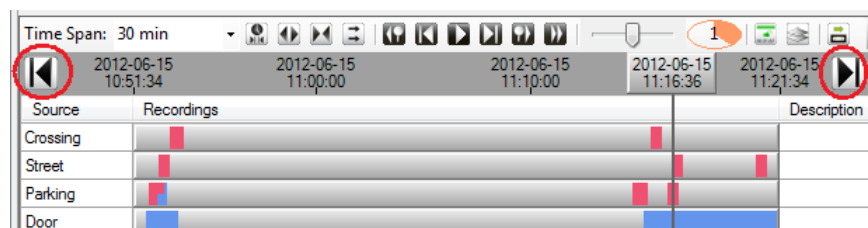*. Hold the left mouse button down and move the mouse pointer to the left for scrolling forward in time and right for scrolling backward in time.
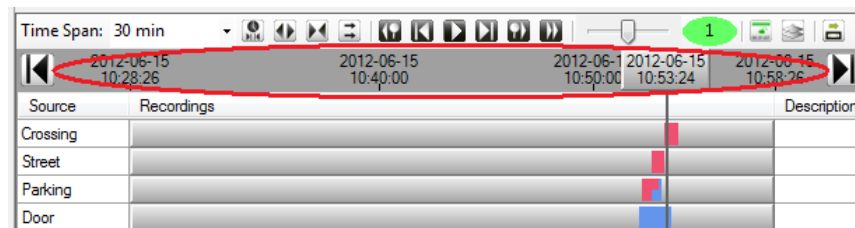
Figure 2.101 Scroll the timespan by dragging the scrollbar outside the handle.

Note that the timespan is still 30 minutes, and the position of the time ruler is still the same after scrolling the timespan. Just the time is scrolled. In the example above, we have scrolled a little less than 7 minutes forward in time.

Move timespan

You can also move the timespan to a specific time instead of scrolling it. Click the button immediately to the right of the timespan selection list; see Figure 2.102, to open a dialog for setting the time for the Time ruler.
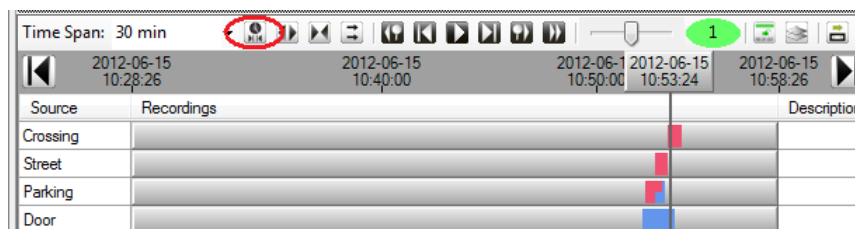
Figure 2.102 Select time button ringed in.

In the Select time dialog, the current time in the Time ruler is pre-selected.
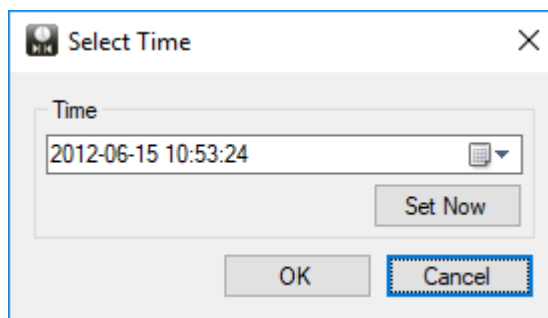
Figure 2.103 Select time dialog.

Enter the desired time and click OK to move the timespan to the selected time. The entered time is set in the Time ruler. The timespan is still 30 minutes; the position of the Time ruler remains unchanged. It is just time that changes.

For your convenience, there is a button for moving the timespan to now, i.e., the current time.
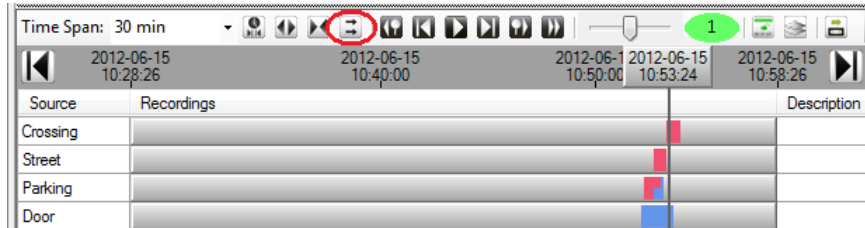
Figure 2.104 Go to now button ringed in.

Clicking this button sets the end time of the timelines to the current time. The time span of 30 minutes and the position of the Time ruler is kept unchanged.

Change timespan

So far, we have mostly been concerned about moving the timespan. You can also change it regarding the time it spans. 30 minutes is the default, but there are several others to choose from. Click the down arrow to the right of the timespan selection list to show the list, see *Figure 2.105*.
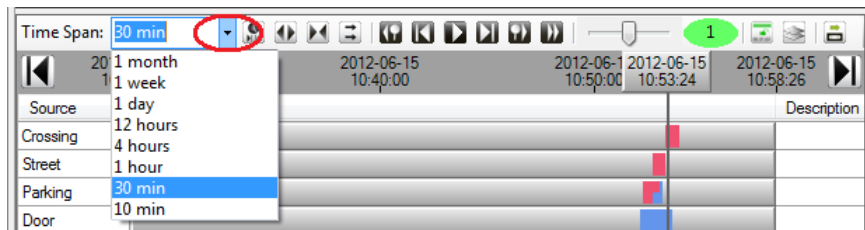
Figure 2.105 Timespan selection list.

There are also buttons for halving or doubling the current timespan, see *Figure 2.106*.
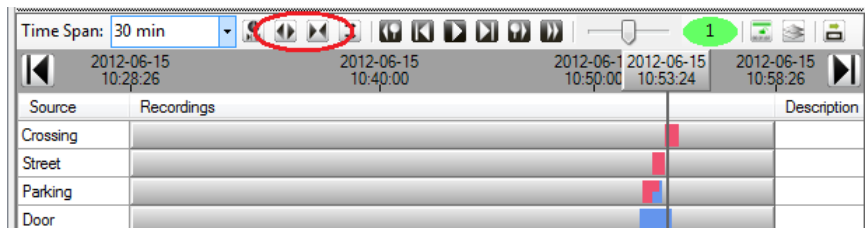
Figure 2.106 Buttons for halving and doubling the current timespan.

E g clicking the *Expand TimeSpan* button when the current timespan is one hour will double the timespan to two hours. Clicking again sets the timespan to four hours etc.

Zooming in timelines

A quick way to look closer at an interesting part of the timelines is zooming by drawing a rectangle directly in the timelines. In *Figure 2.107,* a smaller part is zoomed in.
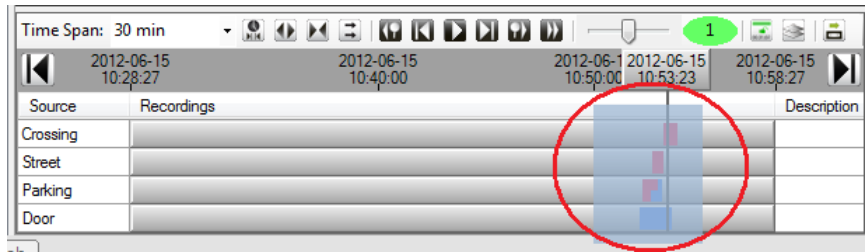
Figure 2.107 Zooming by drawing a rectangle.

When the left mouse button is released, the zoom is performed. In this example, the result looks like in *Figure 2.108*.
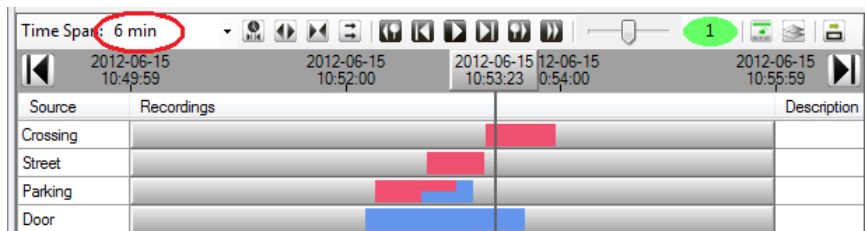
Figure 2.108 After zooming.

This operation affects the time span, which in this example happens to be six minutes.

2.7.3 Video interface

We have had a look at some of the buttons in the Player. In this section, we will have a look at the buttons used for playing back recorded video.
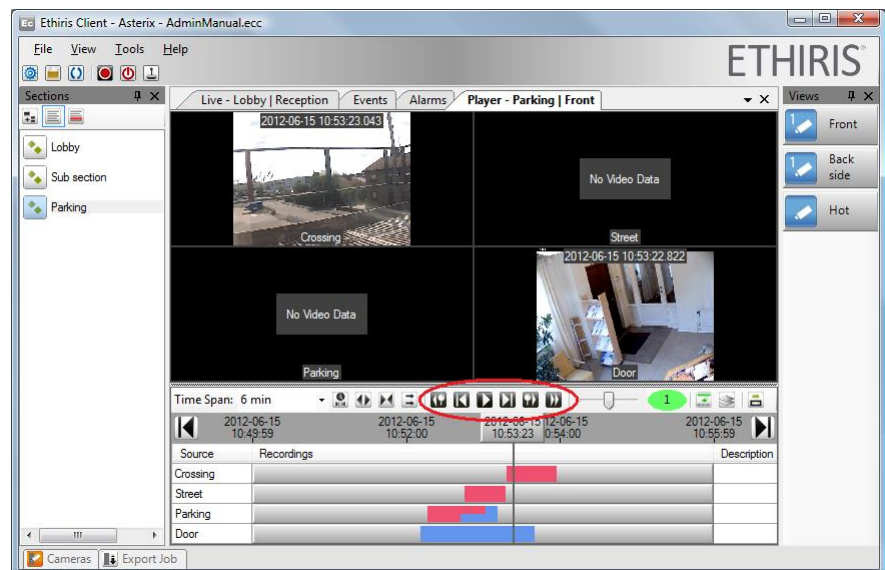
Figure 2.109 The playback buttons in the Player.

These are in black to make them easy to distinguish from the rest of the buttons.

Figure 2.110 A close up of the playback buttons.

The time when the current frame was recorded is displayed in the *Time ruler*. The Time ruler itself can be dragged back and forth for quickly browsing the recorded video. For normal playback, though, the playback buttons are used.

Previous video segment Jumps back to the start of the previous video segment in the timelines. All cameras loaded into the Player are considered when jumping between video segments. See section *Prev/Next video segment* below for an example of the result when clicking the Previous video segment button.

Step backward Displays the previous frame for all cameras loaded into the Player. Each click on this button steps back one frame in the recorded video. If more than one camera is loaded into the Player, the camera whose frame is closest before the last displayed frame in time will be shown.

Note, the 32-bit version of Ethiris Client will step backward one second in the recorded video. If more than one camera is loaded into the Player, the previous frame, according to the new timestamp, is displayed by all cameras loaded into the Player.

Play Is used to start playing back the video. The video is typically displayed at the rate at which it was recorded. The actual rate can be set via the slider to the right of the playback buttons. Playback starts from the current frame. If playback has been paused, it restarts from the current frame. The timelines are scrolled to match the timestamp of the current frame with the time in the Time ruler as the video is played back.

Pause Pauses playback, and the current frames are displayed as still frames in the camera views.

Step forward Step forward displays the next frame among all cameras loaded into the Player. Each click on this button steps one frame ahead in the recorded video. If more than one camera is loaded into the Player, the camera whose frame is closest after the last displayed frame in time will be shown.
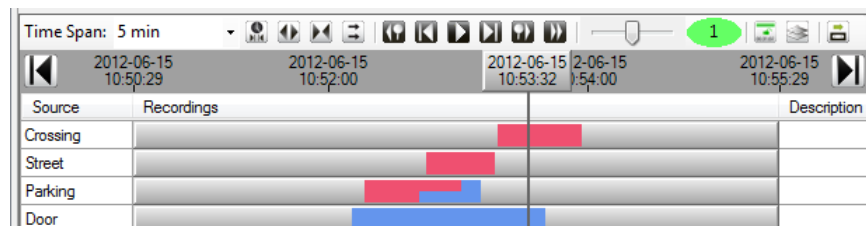
Next video segment Jumps to the start of the following video segment. Check out the example in section *Prev/Next video segment* below for an example of the result when clicking the Previous video segment button. This button just jumps forward instead.

Fast forward Plays the video forwards at increased speed, 8 times the normal rate while the button is depressed. When the button is released, the Player resumes the previous state.

Prev/Next video segment

Below is an example of the result when clicking the *Previous video segment* button.

Figure 2.111 Start position.

Now, clicking the *Previous video segment button* ![icon] scrolls the timespan back in time.
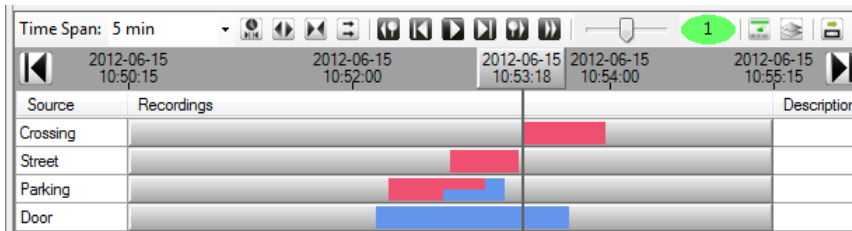
Figure 2.112 After one click.
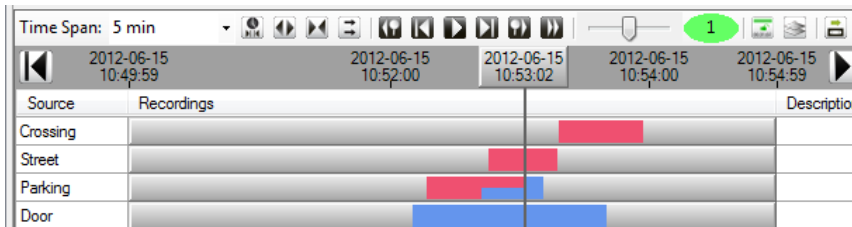
Figure 2.113 After another click.

The step above may seem a little strange. The logic is to jump to the start of a video segment where there is a change in the recording. At the point in time in *Figure 2.113,* event recording stops, and just continuous recording goes on. Clicking again results in *Figure 2.114*.
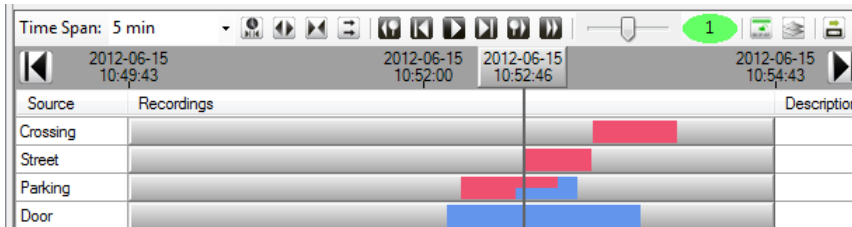
Figure 2.114 After yet another click.
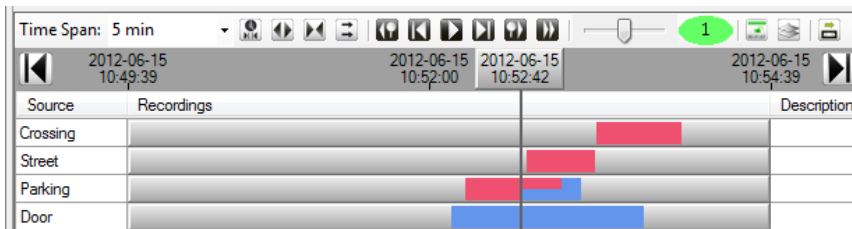
Figure 2.115 And the last click in this example.

Playback speed

The playback speed can be altered to slow motion/fast motion. The speed can be set between 1/128 to 128x normal speed.
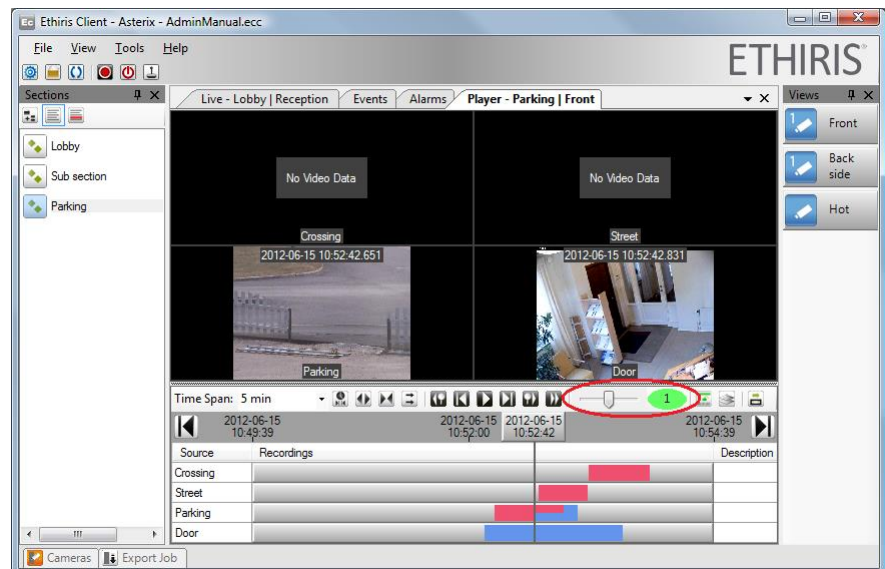
Figure 2.116 Playback speed can be changed by dragging the slider.

The current setting is displayed to the immediate right of the slider, see *Figure 2.117*.
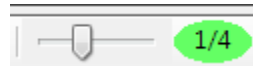
Figure 2.117 Playback speed set to ¼ of normal speed.

Change the speed by moving the slider handle or select the slider, then press left/right arrow keys on the keyboard.

Buffer indicator

A new feature from Ethiris version 5.6 and later is the so-called *buffer indicator*.
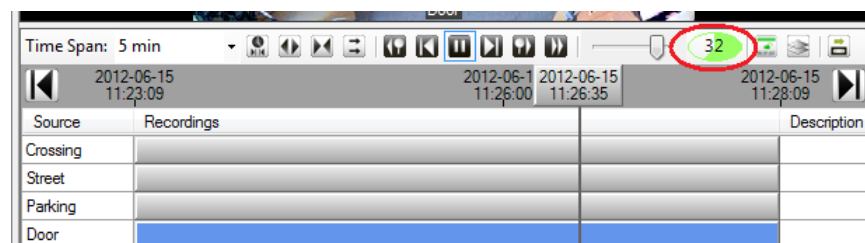
Figure 2.118 The buffer indicator in the Player.

The purpose of the indicator is to give the operator a hint of whether the system manages to deliver video to the player at a sufficient pace. When the indicator indicates that the system does not keep up, the operator can do something about the problem by, e.g., decrease the playback pace or select fewer cameras simultaneously in the player.

When you use the player, Ethiris Client requests recorded video from Ethiris Server. To be able to playback video at a smooth pace, a certain buffering of video takes place in the client, i.e., images are retrieved from the server in advance. The buffering is limited to a maximum of 500 MB in the 32-bit version of Ethiris Client or 2GB in the 64-bit version totally for all cameras that are displayed in the player.

Buffering occurs when the operator selects new cameras into the player or selects a new current time (where the time ruler points). Buffering also occurs during playback when the buffer has decreased to approximately 2/3 of the maximum buffering; at that time, the client requests more video from the server.

The main principle is that when the indicator is green, everything is OK, and when it is red, the system has problems delivering video at a sufficient pace. Unfortunately, the whole truth is not quite that simple. Even when the indicator is red, everything might be OK. It may happen when there are no more images for a specific camera to deliver, and then the buffer will not be filled.

Time ruler

The Time ruler displays the time of the currently displayed frame(s) of the recorded video.

If you move the Time ruler, recorded frames are displayed instantly in the camera views as the ruler is moved to different time stamps.

In *Figure 2.119,* you see the area you should "grab" to move the time ruler. Click with the left mouse button, and while holding it down, move the mouse pointer to left/right. When you release the mouse button, frames are loaded from Ethiris Server for buffering, making playback work more smoothly.
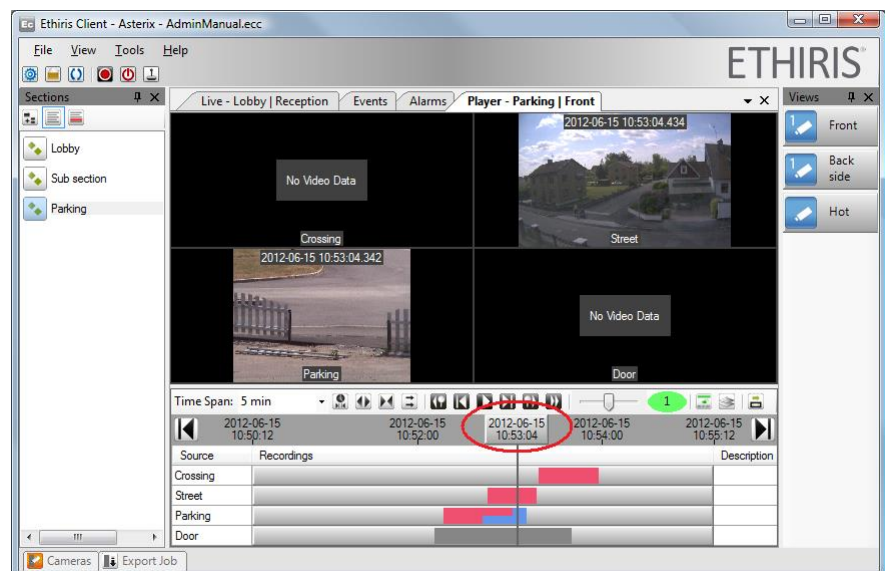
Figure 2.119 Move the time ruler to search quickly in recorded video.

Deleted video

When the video for a camera has been deleted, it is indicated in the timelines with a dark grey nuance. In *Figure 2.120,* a deleted video sequence for the camera Door is ringed in.

The reason why video is deleted can be that automatic cleanup of video is selected. Default deletion is performed after 30 days. Another reason might be that the storage device is full, which means that Ethiris Server has to delete old video to make room for new video.
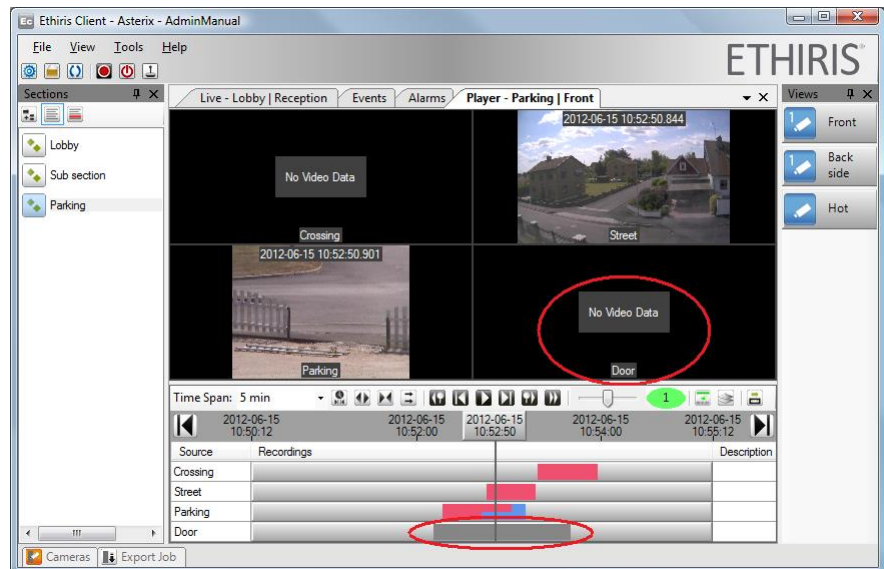
Figure 2.120 Video has been deleted for the camera Door.

The result is that the corresponding camera view displays the message *No Video Data*.

Locking the timelines

The normal behavior when playing back video is that the timelines scroll along with the playback to match the corresponding time in the Time ruler. The Time ruler stands still.

However, when exporting video, there is an option to export the current selection in the timelines. If you have found the recorded video you are interested in and managed to get the start and end time of the timelines as desired, you do not want the time to change. By default, when you start playback, the timelines start, and end time changes when the timelines scrolls.

To avoid this, you can lock the timelines. Click on the button that is marked in *Figure 2.121*.
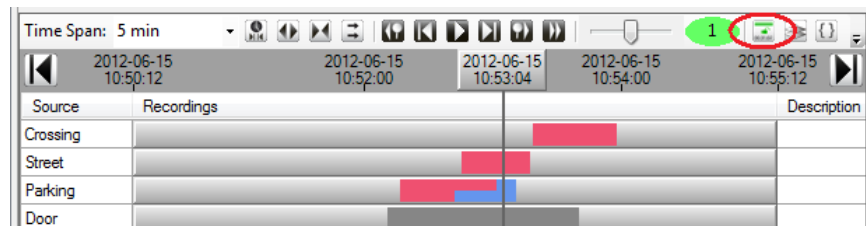
Figure 2.121 The Lock timelines button.

When the timelines are locked, playing back video will not scroll the timelines, but instead, the Time ruler is moved to match the current timestamp. Locked timelines are indicated by a red icon in the *Lock timelines* button.
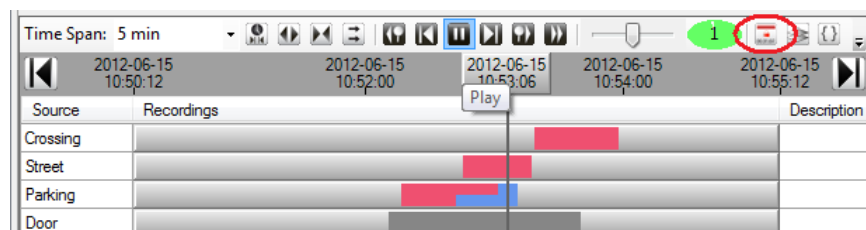
Figure 2.122 Move the time ruler to search quickly in recorded video.

Show/hide overlay on cameras

As a default, the current timestamp and the name of the camera are displayed in the camera views for each camera in the player. Furthermore, text fields and LEDs can be displayed for presenting logged data. As in *Figure 2.123,* where the amount of motion in front of the camera Door is presented together with the recorded video.
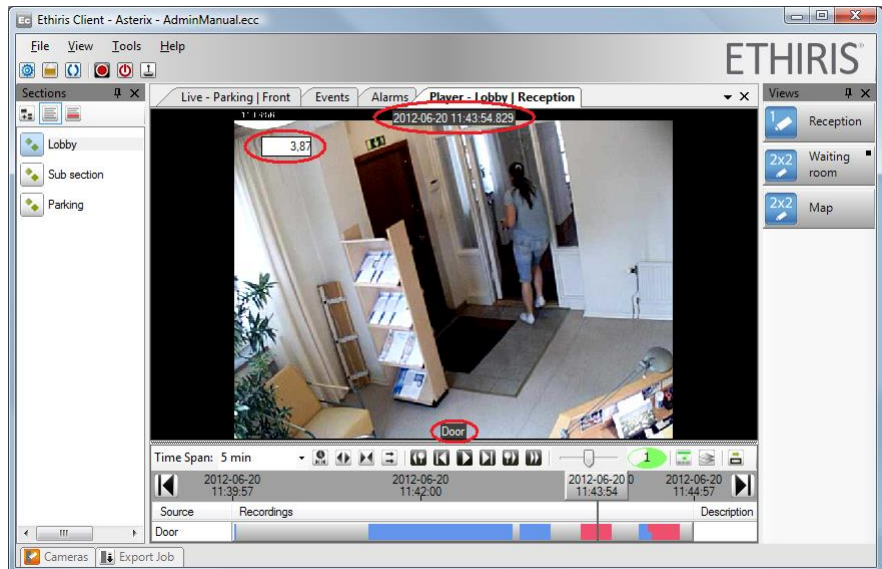
Figure 2.123 Overlaid data is presented on top of the camera video.

You can turn off this information by toggling the button *Show/hide overlay on cameras*, see the ringed in button in *Figure 2.124*.
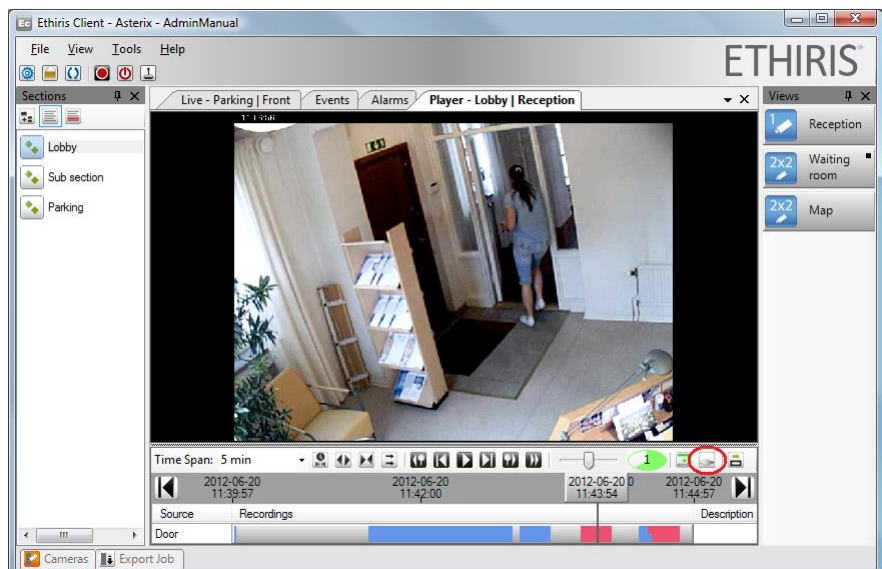
Figure 2.124 Overlaid data can be hidden by toggling the mode of the button that is ringed in in the image above.

Summarized timelines

If you wish to study several cameras together in the player, the list of timelines might get long and take up considerable screen space. A sum of the recording states for all displayed cameras can be displayed instead of each camera individually. Click the button Summarize timelines for all cameras on the timelines toolbar to display the timelines in a compact format, see *Figure 2.125*
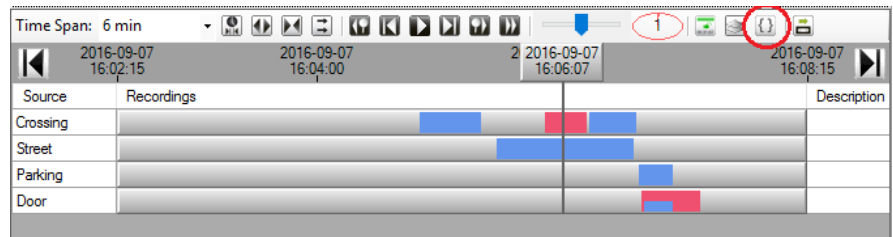
Figure 2.125 Toggle timeline summarized mode with the button that is ringed in in the image above

In this mode, only two timelines are displayed, one shows recordings status for the camera that is selected in the player (has a green border), and the other shows a summarized recording status for the other cameras currently displayed in the player. The summarized timeline is generated as follows:

- A time interval where at least one of the cameras is performing event recording is marked in red.

- A time interval where none of the cameras are performing event recording, but at least one of them is recording continuously is marked in blue.

- A time interval where no camera is recording is marked in grey.

In summarized mode, you will get the timelines shown in *Figure 2.126*. Notice the icon on the toolbar button, indicating the current display mode.
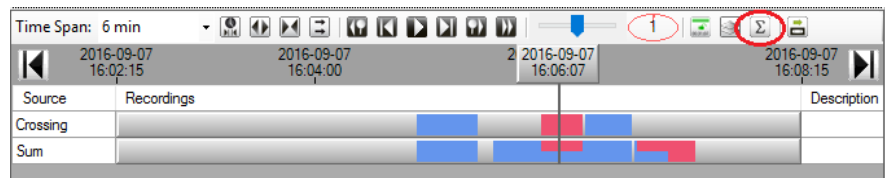
Figure 2.126 Summarized timelines in the player.

2.7.4 Export video

When you have found the desired recorded video, you often also want to export it to be able to share it or perhaps send it to the police or authority of some kind.

There are three main ways to select what to export; the current selection in the timelines (all cameras), a specific camera with the current selection in the timelines, and a specific video segment for a camera.

The current selection in the timelines

Click the Export selection button to open the Export dialog, see *Figure 2.127*.
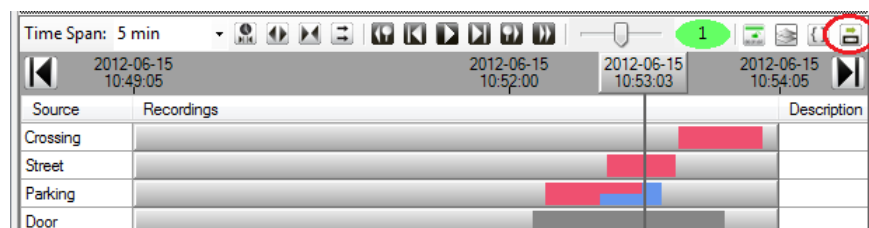
Figure 2.127 Click the Export selection button to open the Export dialog.

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The Export dialog opens, and the *Start time* and *End time* are copied from the corresponding time stamps in the timelines. In this case *2012-06-15 10:49:05* and *2012-06-15 10:54:05*. By default, all the cameras that are loaded into the Player are pre-selected in the Export dialog, see *Figure 2.128*.
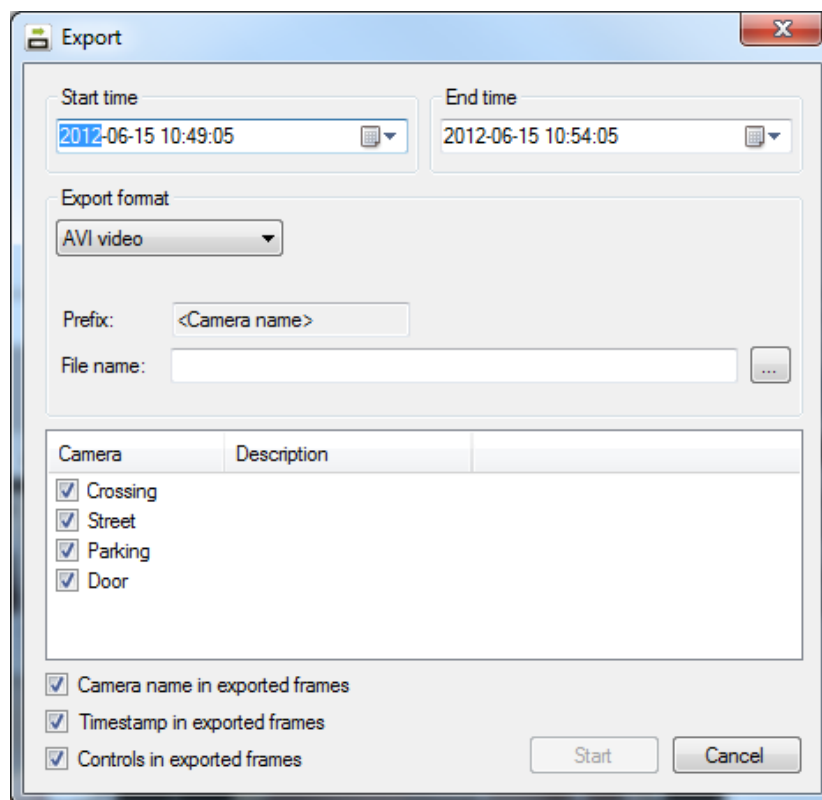
Figure 2.128 The Export dialog.

Following is an explanation of all the fields in the dialog.

Start time determines the start time of the recorded material to export. As you can see in *Figure 2.127,* there is no recorded video at the beginning of the timelines. In practice, the export will start at the first frame encountered in the recorded material between *Start time* and *End time*. The start time is copied from the selection made earlier, but can be changed directly in the Export dialog.

End time determines the end of the recorded video to export. The same rules apply here as for start time. If no recorded video exists for the last second, the export will comprise everything from the first frame until the last frame in the timespan specified by the *Start time* and *End time*. The end time is copied from the selection made earlier, but can be changed directly in the Export dialog.

Export format can be one of three formats; *Ethiris export*, *AVI video,* or *JPEG pictures*.

- *Ethiris export* – this is the default. This is the only export format that does not re-encode the video during export, and the video is stored in its original compression format in a container file with the extension .ethe. The exported file is signed with a digital signature that can be played and validated by *EthirisViewer* or validated *EthirisSignatureValidator*.
  If you export a 360-camera, the full 360-image will always be exported. Later, when viewed in *EthirisViewer*, you can dewarp the image as you like, including pan, tilt and zoom in the image in the same way as you can in Ethiris Client.

- *AVI* - results in one file containing all video for one camera. There is a limit in Windows Media Player allowing a maximum of 2 GB large files. If the export results in a file exceeding this limit, it is automatically divided into several files by Ethiris. The following files will have an extra (x) added to the file name, where x is a number beginning at 2. If you export a 360-camera, the exported material will be dewarped the same way as it is in the camera view you are exporting from.

- *JPEG* - If you choose JPEG pictures, each frame will be stored in a JPEG-file. Each exported JPEG file is signed with a digital signature that can be validated by *EthirisSignatureValidator*. If you export a 360-camera, the exported material will be dewarped the same way as it is in the camera view you are exporting from.

Copy EthirisSignatureValidator to destination directory checkbox is displayed if you have selected *JPEG pictures* as export format. If this alternative is checked, the validator program will be copied to the same directory as the JPEG pictures are exported to. The validation program is used for validating the authenticity of the exported pictures. This is done by using a digital signature, a *watermark*.

Copy EthirisViewerLauncher to destination directory checkbox is displayed if you have selected *Ethiris export* as export format. If this alternative is checked, a single file – EthirisViewerLauncher.exe – is copied to the same folder as the exported *.ethe file. The launcher contains all files necessary for running Ethiris Viewer except .NET framework 4.0. The launcher can be used to run Ethiris Viewer on any Windows computer where .NET Framework 4.0 is installed without requiring any installation.

The EthirisViewer program is used to display the video in exported *.ethe files and to validate the authenticity of the exported video. Validation is done by using a digital signature.

Prefix is always the name of the camera if more than one camera is selected for export at the same time. Each camera will be exported to its own file. E g if one of the camera names is *Door* and the file name is set to *Export,* the file name will be *DoorExport.avi*. If only one camera is selected for export and the Export format is JPEG pictures, the prefix can be any text. In the case of one camera and Export format is AVI, you cannot enter any text for *Prefix*.

Suffix can be entered if you choose Export format JPEG pictures. The suffix is added to the end of the file name.

File name is both path and name of the file(s). Click the browse-button for browsing for a directory. In the browse dialog, you can also create new directories if desired.

In the list of cameras, select the camera(s) that shall be exported. Each camera will be exported to its own file(s).

Camera name in exported frames will overlay the camera name on the exported frames. See *Figure 2.129* for an example of what it looks like in Windows Media Player. Only available with AVI or JPEG export formats.

Timestamp in exported frames will overlay the timestamp on each frame. Only available with AVI or JPEG export formats.

Controls in exported frames will overlay any defined text fields and/or LEDs from the view definition on each frame. Only available with AVI or JPEG export formats.
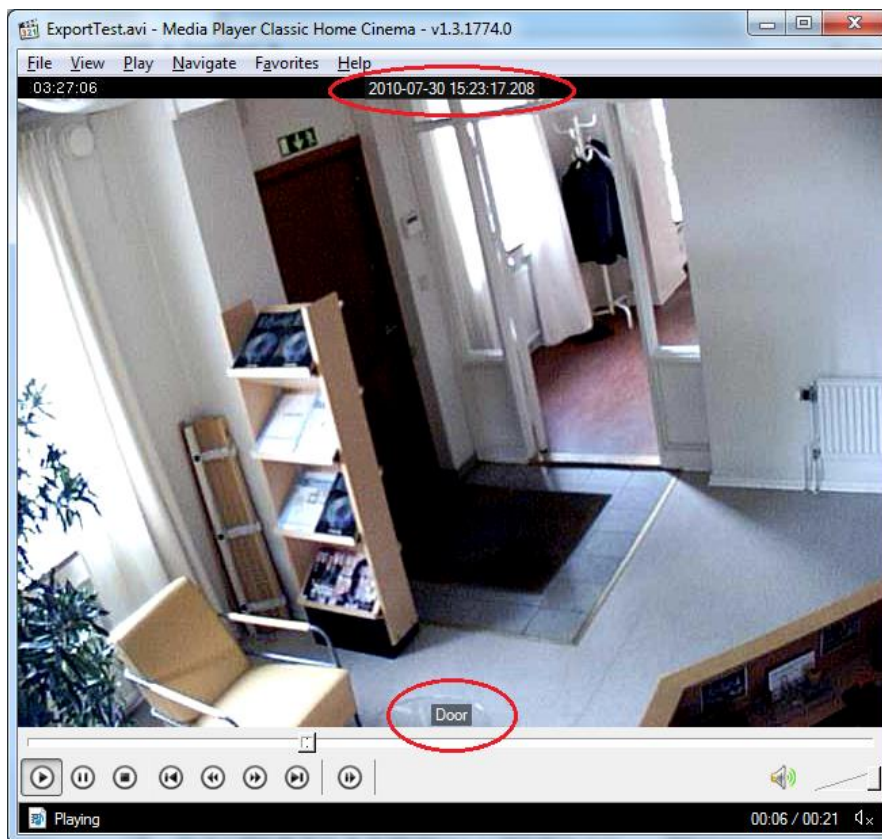
Figure 2.129 Example from Windows Media Player playing an avi file.

Start button starts the export. A dialog will appear if the Export format is AVI video, as you have to choose AVI codec. A list of the available codecs on the local computer is displayed when you click the *Compressor list*.
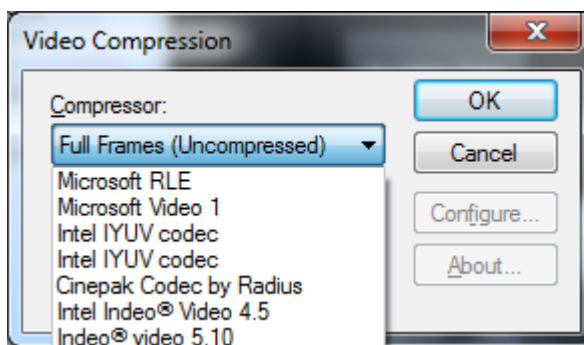
Figure 2.130 Dialog for choosing codec when exporting to AVI file.

As soon as the export starts, it is added to the *Export Jobs* tool window. Several export jobs can be started before an ongoing export is finished. In *Figure 2.131* is an example of an ongoing export displayed in the *Export Jobs* tool window. We will take a closer look at this tool window later on in the section *Export Jobs tool window* on *page 2:99*.
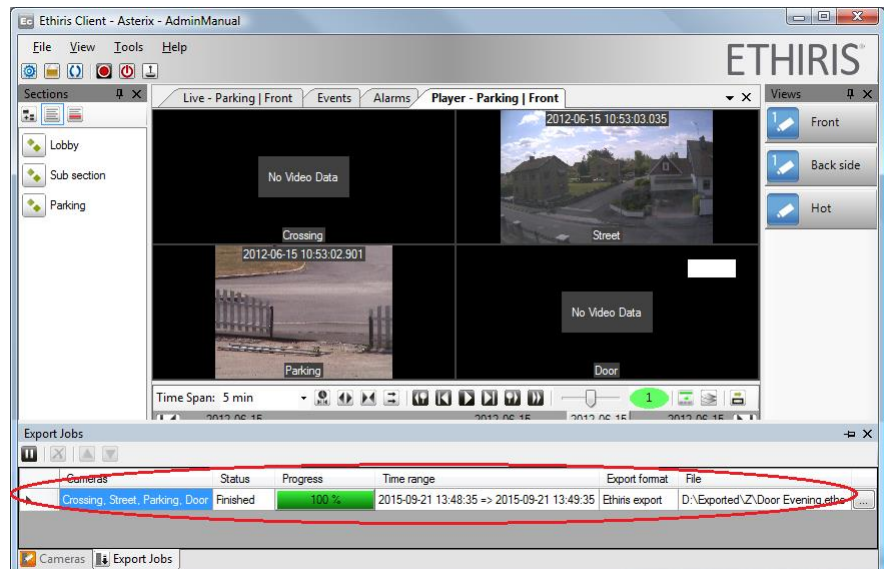
Figure 2.131 Export job in progress.

While an export job is in progress, you can keep working with other parts in Ethiris Client. Keep in mind that if you start an export job with multiple cameras and you lose the privilege to export video from any of those cameras (for example: by logging out), they will be skipped when the job gets to them. If the export of a certain camera has already started, it will finish even if the privilege is lost.

Cancel button simply closes the Export dialog without starting any export jobs.

Export a specific camera

As we saw above, changes in selection can be made in the export dialog. The three different approaches to export simply set different default values in the Export dialog. This second option is used when you want to export video from a specific camera among those loaded into the Player. Right-click in the desired camera view and select *Export…* from the popup menu.
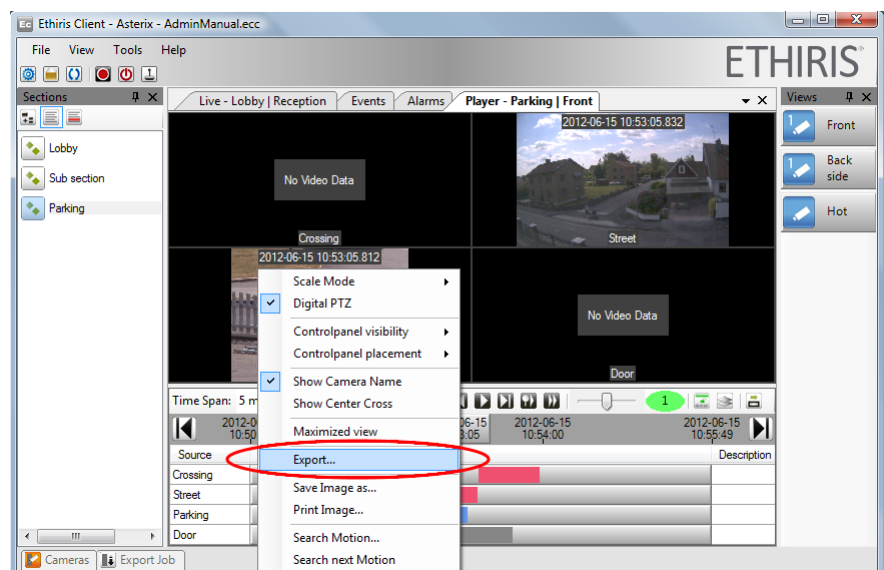
Figure 2.132 Export specific camera by right-clicking the camera view.

In this case, the Export dialog opens with Start time and End time copied from the current selection in the timelines, but only the camera you right-clicked is pre-selected in the camera list.

Export a specific video segment

This third option of opening the Export dialog also pre-selects a specific camera. Furthermore, the Start time and End time are adjusted to the video segment you right-clicked and then selected *Export recording…* from the popup menu.
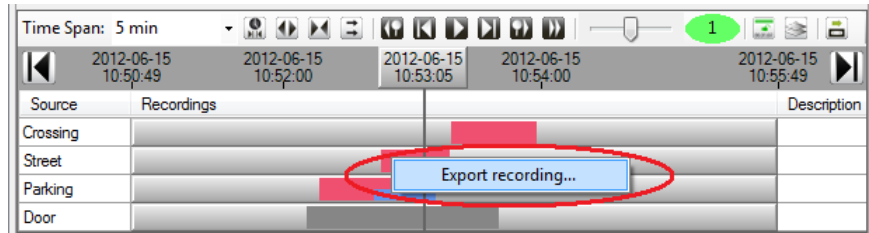
Figure 2.133 Export specific video segment.

2.8 Events

2.8.1 Overview

The Events panel displays all events that have occurred in the system. By default, events from the latest hour are shown.
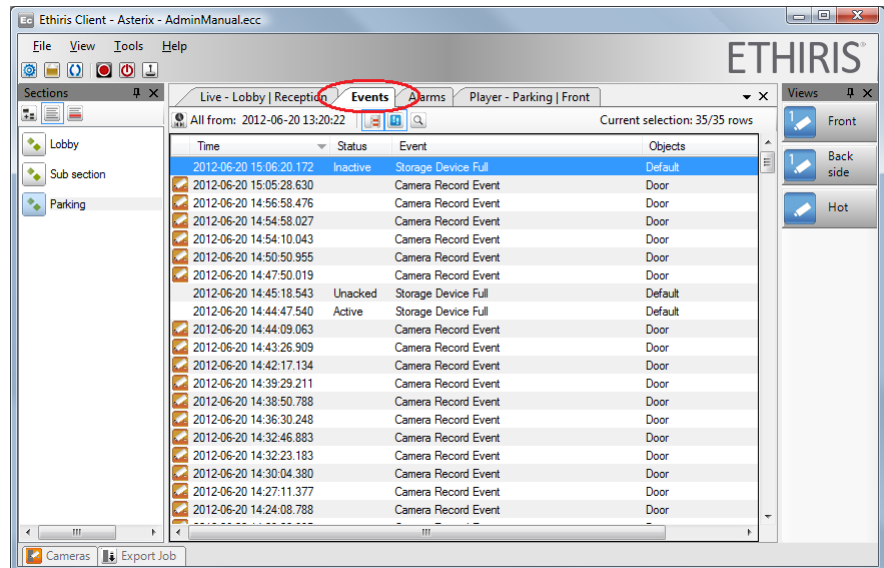
Figure 2.134 The Events panel in Ethiris Client.

Events are simply events in the system which are not serious enough to be considered Alarms. They are an excellent tool to provide information about what has happened in the system.

There are both automatically created *system events* and manually created *custom events*.

Order

The order in which the events are displayed is in decreasing time order with the newest event on top. By clicking on the desired column header, the order can be changed. Clicking again on the same column header reverses the order, e.g., from decreasing to increasing.

Type of events

Some system events are automatically created in Ethiris. The most common is the *Camera record event*. Each time an event-recording starts on a camera, it is logged and displayed in the Events panel.

Another system event is the *License camera limit exceeded* event. This should rarely happen, but if it does, it indicates that the maximum number of cameras allowed by the current license has been exceeded. The only way this can happen is when you have a *Premium* license level and the number of Active cameras exceeds the license limit. The premium level accepts that more than the allowed number of cameras are entered into the Server configuration, but only the allowed number of cameras must be active at the same time (floating camera license).

Whenever any *Alarm* in the system changes status, this will be logged as an event.

Finally, Custom events can be created in Ethiris Admin. These are user-defined events that can represent virtually any event imaginable. The condition for when the event shall be activated is created in Ethiris Script, which gives full flexibility. An example of a custom event can be found in the *Getting Started with Ethiris* manual.

Filter

By default, all events from the latest hour are displayed in the events list. To change which alarms are displayed, click the *Filter* button, see *Figure 2.135*.
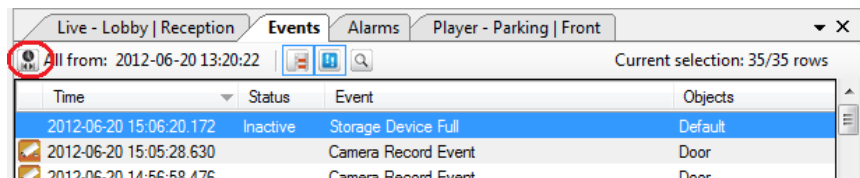
Figure 2.135 Click the Select time button to change what events are displayed.

The Event Filter dialog is opened, see Figure 2.136.
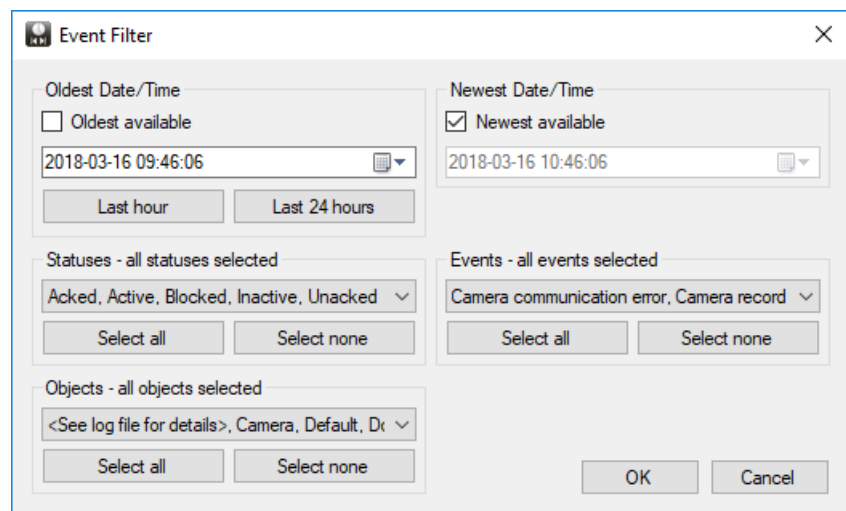
Figure 2.136 The Event Filter dialog.

The dialog is more or less self-explanatory, but for completeness, we will describe the various fields.

Oldest Date/Time determines how old the events can be to be displayed in the list.

Oldest available when checked means that no matter how old the event is, it will be displayed in the list.

If *Oldest available* is not checked, the date and time below determine how old events are displayed.

Last hour, clicking this button resets the default setting, i.e., sets *Oldest Date/Time* one hour ago and checks the *Newest available* checkbox.

Last 24 hours, clicking this button sets *Oldest Date/Time* 24 hours ago and checks the *Newest available* checkbox.

Newest Date/Time determines how new the events can be to be displayed in the list.

Newest available when checked means that no matter how new the event is, it will be displayed on the list.

If *Newest available* is not checked, the date and time below determine how new events are displayed.

Statuses By only selecting certain types of statuses, the list is filtered to only show events with the selected statuses. Default is that events with all types of statuses are shown.

Click the small arrow in the selection box to show the alternative that exists and select or deselect specific statuses. Select the statuses you want to show events for in the list and uncheck those you don't want to show.
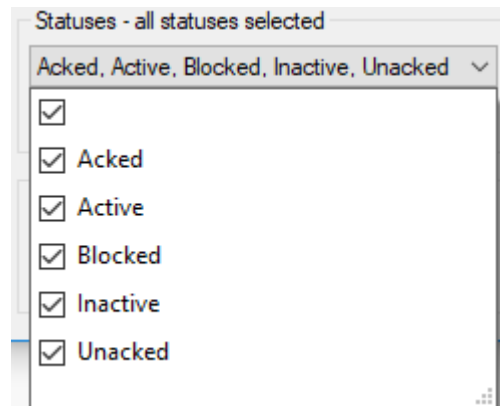
Figure 2.137 The selection box for statuses.

For an easy way of selecting all statuses, click the button *Select all* in the frame *Statuses.* If you want to deselect all statuses, click the *Select none* button in the frame *Statuses.* Mind that if no statuses are selected, nothing will be shown in the event list.

If you want to show events without status, select the empty row at the top of the list.

Events By only selecting certain types of events, the list is filtered only to show the selected events. The default is that events with all types are shown.

Click the small arrow in the selection box to show the alternative that exists and select or deselect specific events. Select the events you want to show events for in the list and uncheck those you don't want to show.
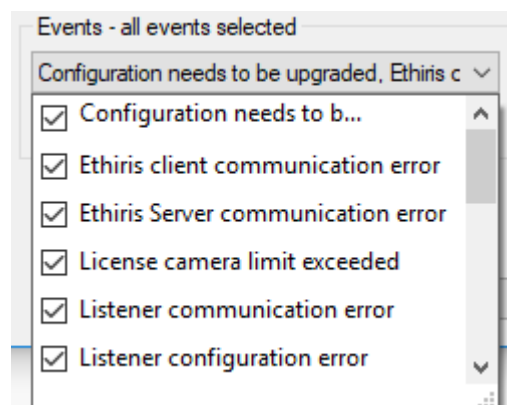
Figure 2.138 The selection box for events.

For an easy way of selecting all events, click the *Select all* button in the frame *Events.* If you want to deselect all events, click the *Select none* button in the frame *Events.* Mind that if no events are selected, nothing will be shown in the event list.

Objects By only selecting certain types of objects, the list is filtered to only show events with the selected objects. The default is that events with all objects are shown.

Click the small arrow in the selection list to show the alternative that exists and select or deselect specific objects. Select the objects you want to show events for in the list and uncheck those you don't want to show.
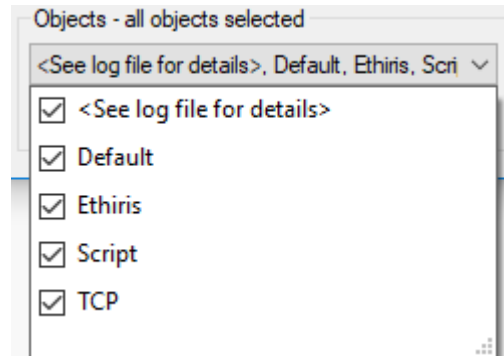

Figure 2.139 The selection list for objects.

For an easy way of selecting all objects, click the *Select all* button in the frame *Objects.* If you want to deselect all objects, click the *Select none* button in the frame *Objects.* Mind that if no objects are selected, nothing will be shown in the event list.

The selection list is built dynamically based on the existing objects in the server and client configurations. Therefore the list might have different content.

OK button applies the new settings to the events list.

Cancel closes the dialog without changing the filter settings in the events list.

Checking both *Oldest available* and *Newest available* and selecting all statuses, events, and objects result in an unfiltered list that displays all events currently stored in the system.
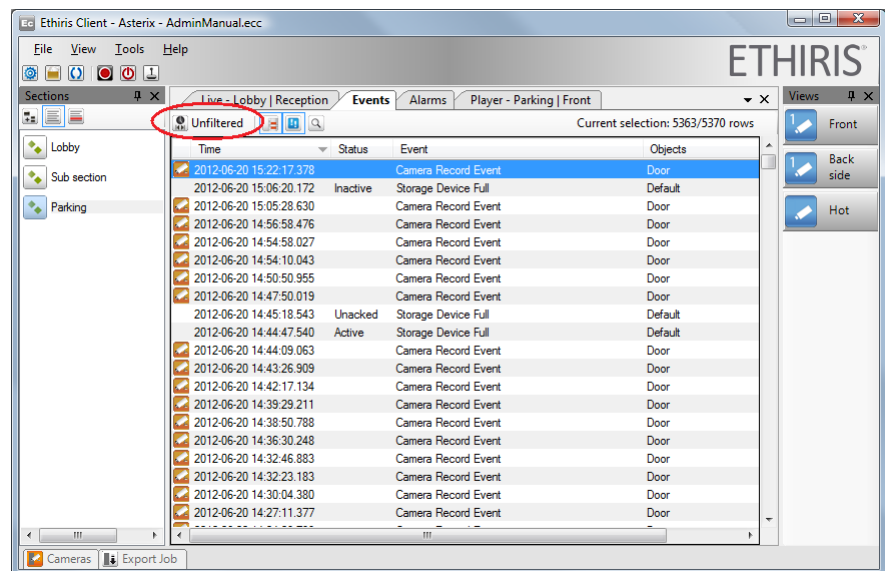
Figure 2.140 An unfiltered event list.

Event type filter

There are three main types of events; *Events, Alarm state changes,* and *Audit trail items*. The types which will be displayed in the event list are determined by the mode of the corresponding buttons. As default, *Events* and *Alarm state changes* are displayed. When a type is selected, this is indicated by a thin blue frame around the button.
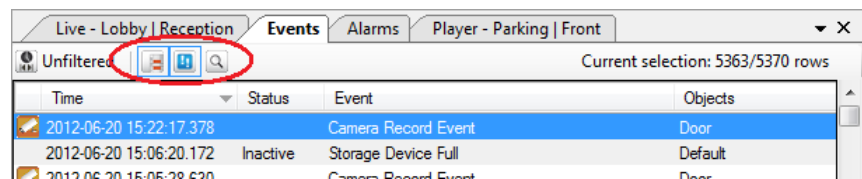
Figure 2.141 Toggle buttons for displaying different types of events.

 Hide/Show events

A button that toggles the display of events in the list.

 Hide/Show alarm state changes

A button that toggles the display of alarm state changes in the list.

 Hide/Show audit trail items

A button that toggles the display of audit trail items in the list.

Current selection indicates how many items are displayed based on the current selection of event types out of the total number of items for the selected time interval. In *Figure 2.142* below, we have chosen to display only audit trail items. In this example, the current timespan contains 7 audit trail items, while the total number of event items is 5381.
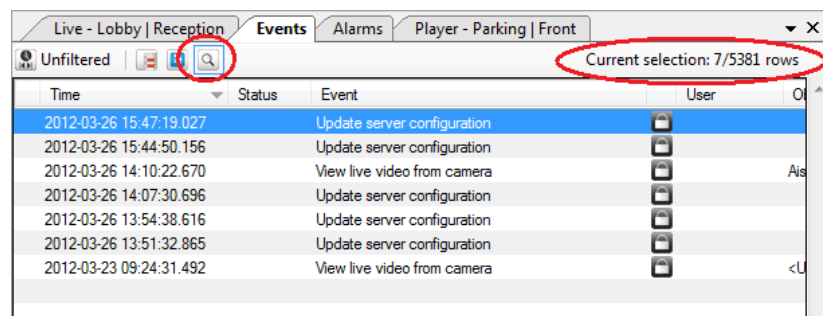
Figure 2.142 Current selection is 7 out of 5381 items.

Audit trail items have an icon representing a lock, see *Figure 2.143*. By holding the mouse pointer over the lock icon extra audit information is displayed.
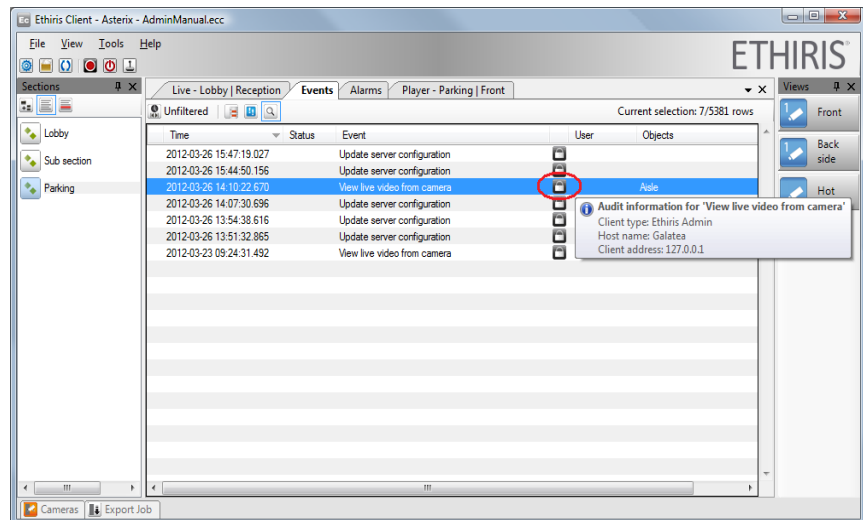
Figure 2.143 Audit trail items contain additional information.

Event list columns

The event list consists of several columns.

Camera(s) association, if an icon is displayed in this column, there is an association with one or several cameras. Double-clicking the event automatically loads the Player with the associated camera(s) and sets the time to the time of the event.

Time displays the time when the event occurred.

Status is only used in conjunction with an alarm. It shows the status the alarm had, e.g., *Active*.

Event describes the type of event.

User is only displayed if you have chosen to display audit trail items. This column indicates who performed the operation if anyone was logged in at the time.

Objects list the objects involved in the event. When cameras are associated with the event, they are listed in this column.

Server displays the Ethiris Server, which the objects belong to. This column is only displayed if the client configuration contains references to more than one Ethiris Server.

Synchronize with Player

As mentioned above, double-clicking an event with associated cameras automatically loads the Player with the associated cameras and sets the time in the Player to the time of the event.

This is an extremely efficient way of finding the relevant recorded video.

2.8.2 Popup menu

Right-click an event in the event list to show a popup menu.

A popup menu is shown with some alternatives if there are any associated cameras. If there are no associated cameras with the event, the popup menu will not show.

Show associated cameras in Default Live Panel
Show associated cameras in Player
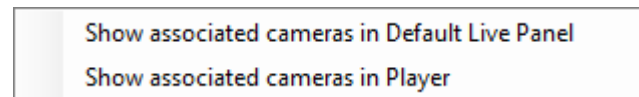
Figure 2.144 Popup menu for an event

Show associated cameras in Default Live Panel means that the cameras associated with the event will be shown in a dynamically created live view.

Show associated cameras in Player means that the cameras associated with the event will be shown in a dynamically created view in the Player.

2.9 Alarms

2.9.1 Overview

Alarms are used for capturing severe problems in the system. When an alarm is activated it appears in the Alarms list and will not disappear until the alarm condition has disappeared <u>and</u> the alarm has been acknowledged.

The Alarms panel displays active or unacked alarms in the system. In the example, in Figure 2.145, the communication alarm is active for two cameras.
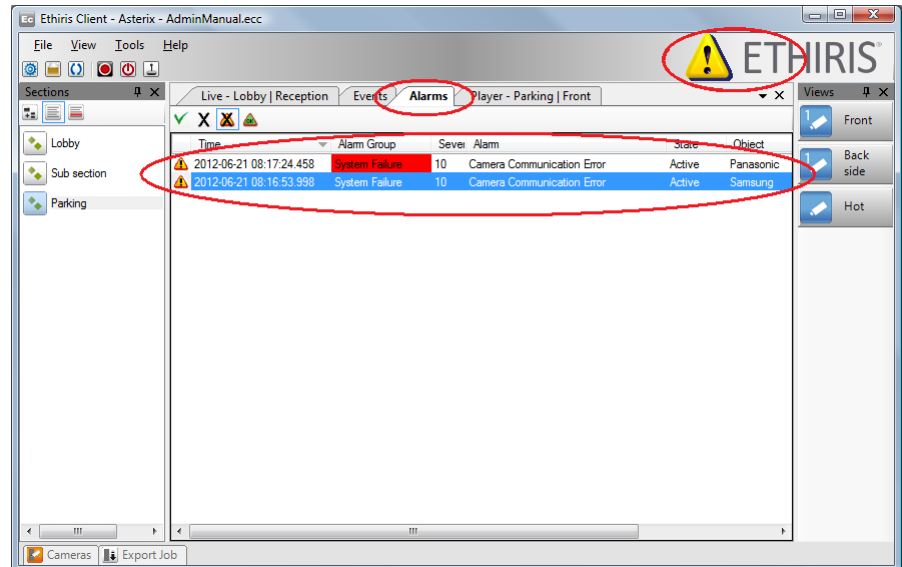
Figure 2.145 An unfiltered event list.

As long as there are any *active* and *unacked* alarms in the system, the Alarm icon in the upper right corner of the Ethiris Client flashes.

When all alarms in the list are either *inactive* or *acked,* the Alarm icon is displayed all the time (not flashing).

Finally, when the list is empty, i.e., no alarms are *active,* and alarms that have been *active* are *acked*, the Alarm icon disappears.

So, when everything is OK, the alarm icon is not visible. If it is, something is wrong.

Figure 2.146 The alarm icon for Config mismatch.

Another alarm icon that can appear instead of or together with the Alarm icon is shown in *Figure 2.146* . This icon appears when a mismatch has occurred between the configurations of the Ethiris Server and Ethiris Client. This alarm is only shown through the icon and is not shown in the alarm list. When the alarm becomes inactive, the icon will disappear by itself.

There are both automatically created system alarms and manually created custom alarms.

Each alarm belongs to an Alarm group. One group is automatically created the *System Failure,* alarm group. All system alarms belong to this group. This group cannot be deleted.

Order

The order in which the alarms are displayed is in decreasing time order with the newest alarm on top. By clicking on the desired column header, the order can be changed. Clicking again on the same column header reverses the order, e.g., from decreasing to increasing.

Type of alarms

There are quite a few system alarms that are automatically created in Ethiris.

Some of them are always created, and some will be created along with the creation of other objects, like the *Camera communication error* alarm is created for each camera that is added to the configuration.

All the system alarms belong to the *System Failure* alarm group, which also is created automatically.

The following six alarms are automatically created for each *Storage device* in the system. There is always a storage device named *Default,* but you can also add additional storage devices if desired.

Storage Device Access Failed is activated when the storage device exists, but Ethiris Server, for some reason, receives an access failure error trying to access the device.

Storage Device Full. Each storage device has a Max storage size for recorded video. If this size is not sufficient and all available storage space has been filled, this alarm will be activated. It implies that either too much video is recorded or that the time for automatic clean up of old video is too long.

Storage Disk Full is more serious. This happens when there is less than 1 GB storage space remaining on the actual disk which the storage device uses.

Storage Device Queue Frames Dropped is activated when Ethiris Server stores frames in such a pace that the disk cannot write data on disk fast enough. Ethiris buffers frames in memory before they are written to disk. Depending on the amount of RAM available in the system, the queue of frames about to be written to disk may become too long. Instead of exhausting the memory and potentially crash the whole system, frames are dropped.

Storage Device Missing is activated if a storage device for some reason suddenly does not exist. It may be due to a disk that has been removed, e.g., a USB-device (God forbid).

Storage Device Insufficient Disk Space is activated if you set a *Max storage size,* which is larger than available free disc space. The alarm is activated in conjunction with the saving of the configuration. Ethiris Server will automatically fix the problem by decreasing the parameter *Max storage size* to a value corresponding to the amount of free disk space.

For each camera in the Ethiris Server configuration the following alarms will be created:

Camera Communication Error is activated if Ethiris Server has no contact with the camera. It happens if the network cable is unplugged or if the camera is simply powered off.

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Camera Recording Error is activated if you have defined a Recording Supervision time in Ethiris Admin, and the camera has not made any recording during that time. If a camera under normal operation is expected to make recordings for example, at least once a day, this supervision can detect if something is preventing the camera from working normally. This alarm is disabled by default.

The following six alarms are always created in an Ethiris system:

Script Runtime Error is activated whenever an error occurs in Ethiris Script. Ethiris script is interpreted in runtime, and errors can occur due to syntax errors as well as for logical errors that depend on various circumstances. It can happen for many different reasons.

Internal Error should normally not happen. If it does, more information about the causes can be found in the Ethiris Server log files.

Memory Exhausted is activated when the system is about to run out of available RAM. One reason can be that too many cameras have too long pre-alarm buffers on event recording.

CPU Exhausted is activated when the CPU runs on 95% or more for a long time.

System Restarted means that Ethiris Server has been automatically restarted due to a problem. Information about the cause can be found in the Ethiris Server log files.

Client KeepAlive Timeout. This can happen when there is a problem in the communication between an Ethiris Client and the Ethiris Server.

Configuration needs upgrade indicates that the server configuration does not have the same version as the Ethiris Server. You need to open the server configuration in Admin and save it. See the Admin configuration manual for a full description.

The following two alarms are created for each OPC Server that is connected to the Ethiris Server:

OPC Communication Error is activated whenever there are any problems in the communication between Ethiris Server and the OPC Server.

OPC Configuration Error is activated if any problem in the OPC configuration is detected. For example, if an OPC group contains no items.

For each defined listener, the following alarms are created.

Listener Communication Error is activated if the listener detects an interruption in communication with the device it is communicating with.

Listener Configuration Error is activated if it is not possible to establish communication with the device using the defined parameters.

For each defined Remote Client the following alarms are created.

Remote Client Communication Error is activated if the specified client does not connect to Ethiris Server within the specified time.

Some of the earlier mentioned alarms have another structure when the client is run towards a cluster of Ethiris Servers, which requires a Premium license for all members.

Every cluster member has individual server alarms for Internal Error, Memory Exhausted, and System Restarted. They also have individual alarms for data storage: Storage Device Access Failed, Storage Device Queue Frames Dropped, and Storage Device Missing.

Unique alarms for a cluster of Ethiris Servers are:

Capacity Error occurs when the maximum number of cameras allowed by the sum of the cluster's licenses has been exceeded. This only happens when the number of Active cameras exceeds the sum of the license limits. This happens since the Premium license level allows for floating camera license, which means that it is possible to enter more cameras into the Server configuration than the license allows. However, only the allowed number of cameras must be Active at the same time (floating camera license).

Cluster Member Communication Error is activated if an Ethiris Server is unable to contact another cluster member.

Besides all these automatically created system alarms, you can define your own custom alarms as well. You can also define your own custom Alarm groups.

A custom alarm, of course, has its own unique name and is activated via Ethiris Script. The condition for activating the alarm can be almost any condition imaginable. For an example of a custom alarm, please see *Task 15*, *Custom alarms* in the *Getting Started with Ethiris* manual.

Alarm states

An alarm can have several states. The current state of an alarm is indicated by the icon to the left for each alarm in the Alarms list. The normal state is that the alarm is inactive and acknowledged, i.e., everything is OK. In this state, the alarm is normally not visible in the list. The other possible states are:

Active

Is when the alarm condition is true, and the alarm has not yet been acknowledged. If any alarm is in this state, the Alarm icon in the upper right of Ethiris flashes continuously to get the attention of the operator.

Acked

The alarm is in this state when the alarm condition is still true, but the operator has acknowledged the alarm. When the alarm condition is no longer true, an acked alarm disappears from the alarm list.

Unacked

In this case, the alarm has been active and then inactive again (the alarm condition is no longer true), but the operator has not yet acknowledged the alarm. As soon as the operator acknowledges the alarm it will disappear from the alarm list.

Inactive

Alarms are normally not displayed in the alarm list. However, there is an option to show all inactive alarms. There are two reasons for this function; One, you can see when an alarm changed state even if it is inactive for the moment. Two, you can block an alarm in advance before it becomes active.

Blocked

Alarms are not normally displayed either. There is an option for displaying blocked alarms in the alarms list. A blocked alarm cannot be activated. This is useful, e.g., if you know in advance that a camera will be disconnected for a few days. Then you can block the *Camera Communication Error* alarm in advance, thus avoiding the alarm being triggered.

Every time an alarm changes state, this is logged in the Event list. In *Figure 2.147* is an example from the Event list where some alarm status changes have been logged. The list is sorted in reverse time order with the most recent item at the top.

Figure 2.147 The event list contains all status changes for alarms.

Alarm list toolbar

At the top of the Alarms list, there is a toolbar.

Figure 2.148 The Alarms list toolbar.

Acknowledge Alarm

Is used for acknowledging the selected alarm(s) in the alarms list. You may select and acknowledge more than one alarm at the time.

Block/Unblock Alarm

Is used for blocking unblocked alarms or unblocking blocked alarms that are selected in the alarms list.

Show blocked alarms

Is used for displaying/hiding all blocked alarms in the alarms list. When the blocked alarms are displayed in the list, the button has a thin frame around it (the right image).

Show inactive alarms

Is used for displaying/hiding all inactive alarms in the alarms list. When the inactive alarms are displayed in the list, the button has a thin frame around it (the right image), and the text '*Inactive alarms are shown!*' is shown to remind the user that also inactive alarms are shown. This mode is automatically switched off after two minutes.

In the example, in *Figure 2.149,* both blocked and inactive alarms are displayed. Most alarms in the system have never been active, which is revealed by the missing timestamp.

Figure 2.149 Alarm list

Alarm list columns

The alarm list consists of several columns.

State icon indicates the current state of the alarm.

Time displays the time when the current state of the alarm was entered.

Alarm group displays what alarm group the alarm belongs to.

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Severity displays the severity of the alarm. 10 is the most severe, and 1 is the least severe. For system alarms, the severity of *Inactive* can be set in Ethiris Admin. The effect is that the alarm will never appear in Ethiris Client. This can be used if you are not interested in some of the system alarms. It is like blocking the alarm since the alarm is not displayed at all in Ethiris Client.

Info if a blue icon is shown for an alarm, this indicates that there is information supplied for this alarm. If you hover the mouse over the blue icon, a preview of the information is shown.
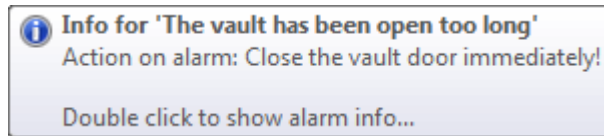

Figure 2.150 Tooltip for an alarm that has info text defined

If the information is a URL to a website, the operator should double click the icon. A window is then shown either with the information text supplied or the website. Multiple windows for different alarms can be open at the same time.
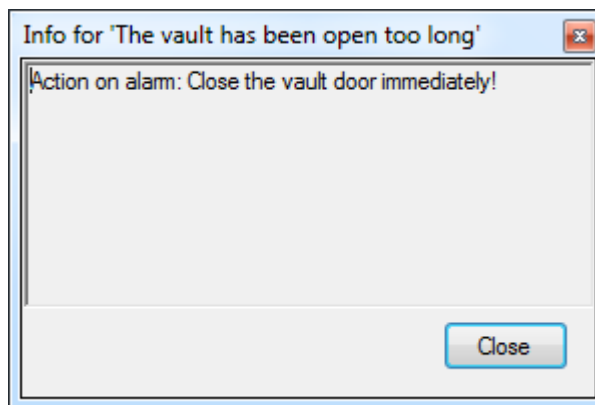
Figure 2.151 Window with information for an alarm

Alarm is a description of the alarm and corresponds to the Text property of the alarm set in Ethiris Admin. This text can be changed for custom alarms but is fixed for system alarms.

State displays the current state of the alarm.

Associated cameras, if a camera icon is shown in this column, this alarm has one or more cameras associated with it. Hover over the icon to get more information.

Object displays which object are associated with the alarm. E.g., for a camera communication error, the camera name is displayed.

Server displays the Ethiris Server, which the objects belong to. This column is only displayed if the client configuration contains references to more than one Ethiris Server.

If you double click a row in the alarm list that has associated cameras, a dynamically created live view with these cameras will be created and displayed in the main live view.

2.9.2 Popup menu

Right-click an alarm in the alarm list to show a popup menu.

A popup menu is shown with some alternatives depending on if there are any associated cameras and/or any information is tied to the alarm.
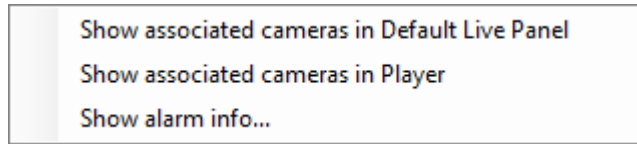

Figure 2.152 Popup menu for an alarm

Show associated cameras in Default Live Panel means that the cameras associated with the alarm will be shown in a dynamically created live view. This menu item is only shown if there are associated cameras to the alarm.

Show associated cameras in Player means that the cameras associated with the alarm will be shown in a dynamically created view in the Player. This menu item is only shown if there are associated cameras to the alarm.

Show alarm into… means that a new window will open containing the info text or web site associated with the alarm. This menu item is only shown if there are info text and/or a website associated with the alarm.

Alarm groups

As mentioned earlier, you can define your own custom alarm groups. You can set the desired color for each custom alarm group, and the system alarm group *System Failure* is always displayed in red.

In *Figure 2.153,* a custom alarm group named *Vault alarms* has been defined with a blue color. Whenever an alarm is triggered, that belongs to that group, it will be displayed in blue color, making it easier to spot those alarms in the alarm list.
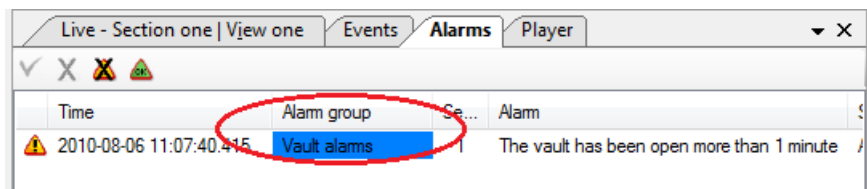

Figure 2.153 Custom alarm group in blue color.

You can also sort the alarm list by any column so that the alarm group can be used for grouping alarms in the list.

2.10 Cameras tool window

2.10.1 Overview

The Cameras tool window provides a convenient way of access to all cameras in the system. The main part of the window consists of a list of all the cameras that are part of the current Ethiris Client configuration.

In *Figure 2.154* is an example of the Cameras tool window when it is docked and pinned to the bottom of Ethiris Client. In this example, two of the cameras are selected.
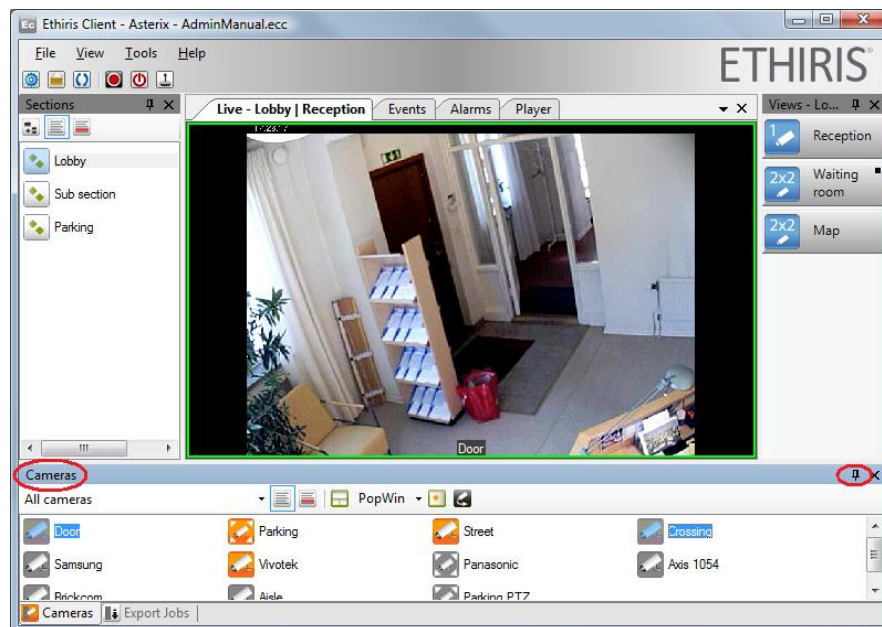
Figure 2.154 The Cameras tool window is docked and pinned at the bottom of Ethiris Client.

The purpose of this tool window is to select desired cameras and view live video or recorded video in the Player.

Selecting cameras

Cameras in the list can be selected in different ways. One way is to select by *drawing a rectangle* with the mouse and *ring in* the desired cameras.
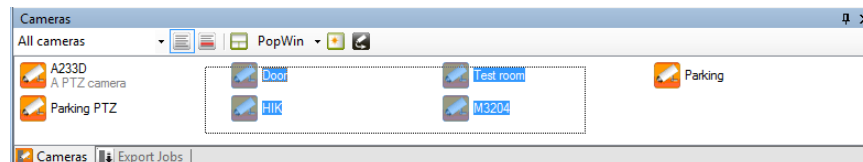
Figure 2.155 Camera selection by drawing a rectangle.

Another way is to click on one camera at the time while holding the *Ctrl* key down. When holding the *Ctrl* key down, clicking an unselected camera adds it to the selection while clicking an already selected camera, removes it from the selection.

Yet another way is to select one camera by clicking it, then holding the *Shift* key down, clicking another camera, then selects all cameras between the first one clicked and the second one.

You can also press the *Ctrl* and *"A"* keys simultaneously to select all cameras that are currently active, i.e., displayed with an orange icon.

All these methods can be combined as well.

Toolbar

The Cameras tool window contains a toolbar.

Figure 2.156 The toolbar in Cameras tool window.

To the far left is a Filter selection list determining which cameras to display in the list.

Figure 2.157 Filter selection list.

All cameras display all cameras that are part of the current client configuration.
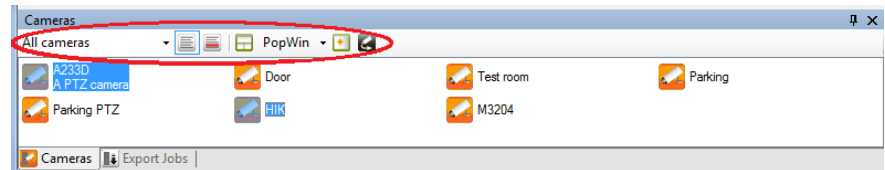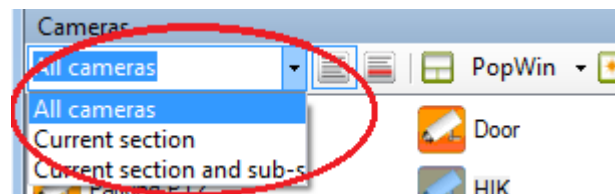
Current section displays all cameras that are part of any view in the current section.

Current section and sub-section display all cameras that are part of any view in the current section, including the sub-sections.

View layout	Can be List view or Detailed. When List view, which is the default, is selected, the list looks as in Figure 2.156, in Detailed view, the list looks as in Figure 2.158.
Show in Default Live panel	This button is only available when at least one camera is selected. When clicked, the selected cameras are loaded into the Default Live panel, and a suitable layout is automatically created. If e.g., four cameras are selected, a 2x2 view is automatically created in the Default Live panel. Any previous content in the Default Live panel is discarded and replaced with the live video from the selected cameras.
Create Dynamic Live View	This button is only available when at least one camera is selected. When clicked, a new Live window is created in the center of the screen with the size 640 x 480 pixels, and the selected cameras are loaded into the window, and a suitable layout is automatically created. If e.g., four cameras are selected, a 2x2 view is automatically created in the new Live window. The new window can be moved, resized, docked or added to an existing tab group is the same way as the Default Live panel can
Popup window list	Is a list with all available Popup windows that have been defined in Ethiris Admin. The list is only available when at least one camera is selected. The effect of clicking a popup window list item is the same as for clicking Create Dynamic Live view with the exception that the popup window is already defined regarding size and position.

Load Cameras in Player

This button is only available when at least one camera is selected. When clicked, the selected cameras are loaded into the Player panel, and a suitable layout is automatically created. If e.g., four cameras are selected, a 2x2 view is automatically created in the Player. Any previous content in the Player is discarded and replaced with the selected cameras.
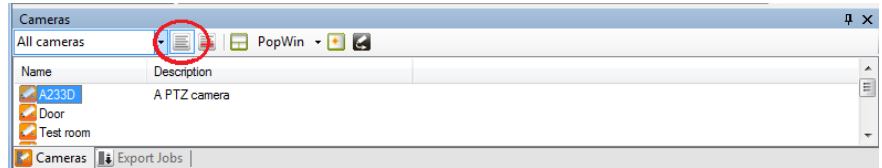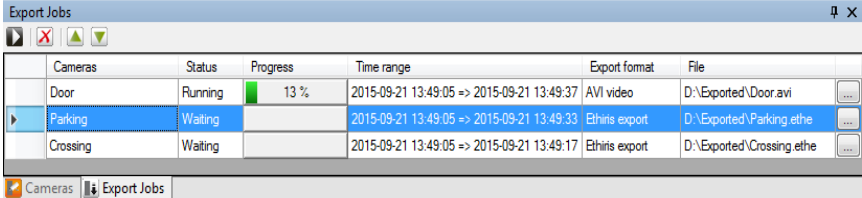

Figure 2.158 Detailed view layout in Cameras tool window.

2.11 Export Jobs tool window

2.11.1 Overview

The *Export Jobs* tool window lists all ongoing exports. Every time you start the export of recorded video, the job is put into the *Export Jobs* list.

Ethiris starts the export jobs one at a time, beginning with the job at the top of the list. It is possible to change the order of jobs as long as they have not started.

Figure 2.159 Example of export jobs in the Export Jobs tool window.

You may also change any other parameter for exports not yet started by clicking the "…" button to the far right.
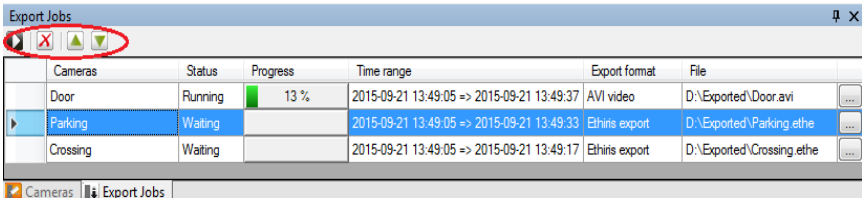
Job Selection

You can select export jobs in the list by clicking somewhere on the row. Holding the *Ctrl* key or the *Shift* key while clicking can select several rows at the same time.

A selected row is marked by a blue background color. In *Figure 2.160* below, the second row is selected.

Toolbar

The Export Jobs tool window contains a toolbar.

Figure 2.160 The toolbar in the Export Jobs tool window.

Start/Pause	Is used for pausing the export and then to start it again. When you click Start in the *Export dialog,* the job is added to the Export Jobs list and started automatically. You can then choose to *Pause* the export jobs. Actually, pressing *Pause* only pause the following export jobs in the list, not the one that has already started.
Delete	Removes selected jobs from the Export Jobs list. If the job being deleted is already started, the job is aborted. The aborted exported file will still be created as far as it got.
Move up	Is used for moving the selected job up in the list. This button is only available when the second job or a job further down in the list is selected, and export is paused.
Move down	Is used for moving the selected job down in the list. This button is only available when the selected job is not the last job, and export is paused.

Export Jobs list columns

The Export Jobs list consists of several columns.

Cameras indicates the name of the camera from which video is exported.

Status indicates the current status of that job. It can be *Running*, *Paused*, *Waiting*, *Finished,* or *Aborted*.

Running is the job which actually runs export for the moment. Only one job at the time is executed.

Paused is the status of all jobs in the queue after the one that is running when the export is paused.

Waiting is the status of all the jobs in the queue after the one that is running when the export is started (not paused).

Finished is the status of the running job when it is finished. This status is most likely to be seen after the export has been paused, and the current job is finished. The export will not be resumed until it is manually started again by clicking the Start button.

Aborted is the status of a running job that has been deleted while running.

Progress indicates the progress in percent of a job.

Time range displays the start and stop time of the job.

Export format shows the compression format selected for the export - *Ethiris export*, *AVI* or *JPEG*

File displays the target filename of the exported video.

2.12 Troubleshooting

This section helps you remedy some problems you might have using Ethiris.

2.12.1 Possible problems

Problem

A camera view displays no video.

Solution

Check that a camera is linked to the current camera view.
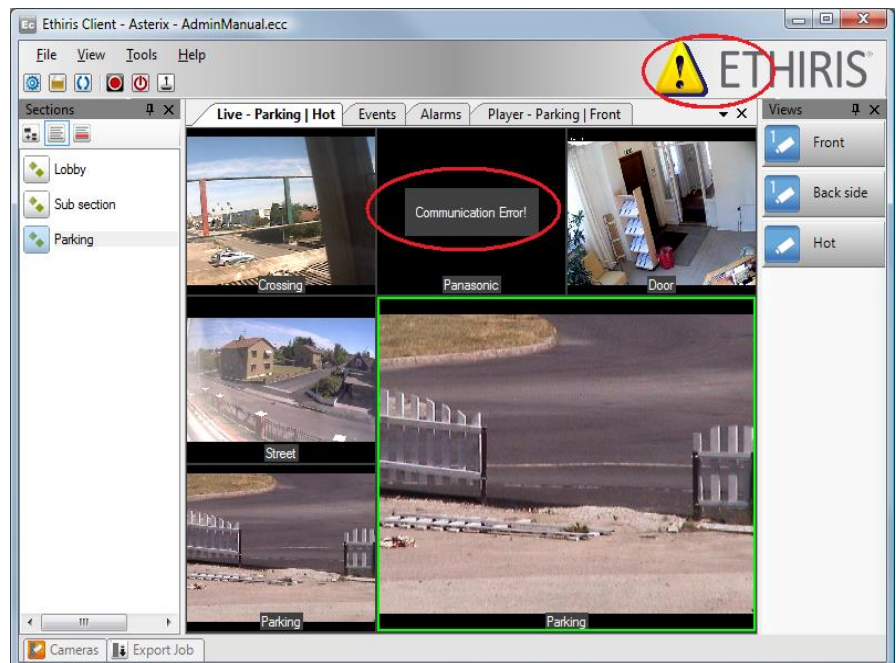
Figure 2.161 No video from some of the camera views.

In *Figure 2.161* above the camera view up to the right displays *Communication Error!* This means that Ethiris Server has no contact with the camera. The cause may be that the camera is powered off, that the Ethernet cable is unplugged or that the camera settings are wrong for user name and password.

When there is a communication error, you can try to access the camera via a web browser such as Internet Explorer. If you cannot access the camera via a web browser, then Ethiris Server is also unable to access the camera.

3 Explanation of Terms

AVI

Audio Video Interleaved. File format for video sequences. Ethiris can export frames to such a file, which can then be played in Windows Media Player, for example.

Camera view

A view that can display frames from a camera. A live view can display up to 64 camera views simultaneously.

Client view

A client view can contain between 1 and 64 camera views. Each client view can be linked to a function button that is displayed in the live view.

Cluster of Ethiris Servers

A cluster of Ethiris Servers means that one or more different physical machines can act as one unit with redundancy. If a member is disconnected, the others can automatically handle the member´s tasks with a barely noticeable impact on any potential clients. This function requires that every member of the cluster has a Premium level.

COM

Component Object Model. A binary communication standard from Microsoft which can be used in communication between various program components. COM is the basis of OPC.

Command port

In communication via TCP/IP, the recipient of data must be identified with both an IP address and a port number. We call the port number on which an Ethiris Server listens for commands from clients the command port. By default, this is 1235. If necessary, the number can be changed in the system configuration for each Ethiris Server. A port number can assume values between 1 and 65535.

Continuously recorded frames

A type of recorded frames which are recorded continuously from a camera at a specific time interval between each frame. The video is recorded regardless of whether alarm events occur.

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Control panel

A panel with some function buttons and text information that can be displayed at the bottom of a camera view.

Data store

The data store is located in Ethiris Server and contains all variables and their current state in the system.

Document window

This is a window that is used for presenting the various types of information, such as live and recorded video. In Ethiris Client there are four document windows by default. These are *Default Live panel*, *Events panel*, *Alarms panel,* and *Player panel*.

Default Live panel

This is the window where live video is displayed by default. However, it is possible to create additional live windows as well.

Floating window

A floating window has been torn away from the main frame and is floating freely. In a floating state, a window can be positioned on another monitor and can be resized as desired.

Function button

A function button in this context is a button in the live view that, when you click it, either select a predefined layout of camera views or activates a Boolean variable in Ethiris Server's data store. The variable, in turn, can be linked to many different functions in Ethiris.

H.264

A video compression standard built on similar technology as MPEG-4. H.264 is also called MPEG-4 part 10. It is even more compact then MPEG-4, about half the size for a comparable quality. But on the other hand, it is very demanding for the hardware, especially when it comes to high-resolution frames.

Hotspot

A type of camera view that displays frames from the camera manually selected and/or automatically from a camera linked to a Boolean variable in Ethiris Server's data store.

I/O

Input/Output. Exist both as digital and analog signals. Several camera models have a number of digital inputs and outputs that can be used to connect external equipment to the system.

IP address

Each device connected to a computer network has a unique IP address that consists of 4 groups of digits. Each group can be 0-255, for example, 192.168.30.29.

License key

A key that is received from Kentima Solutions after payment has been made, and a registration key has been submitted. The license key is used to "unlock" Ethiris via the Kentima License Handler.

Live frames

Video from a camera which is filmed right now, as opposed to recorded frames.

Main frame

The main frame is the area in Ethiris Client available for various windows such as the Default Live panel, the Player, and tool windows.

MJPEG

Motion JPEG, a video compression format where each frame is a separate JPEG image.

MPEG-4

A video compression format where a complete image (i.e., I-frame) is followed by several smaller images depicting the difference compared to the last image (P-frames or B-frames). This is a more compact format compared to MJPEG.

Network camera

A type of camera that can be directly connected to a network. The camera device has a unique IP address.

OPC

OLE for Process Control. A communication standard developed within the automation industry for communication between different systems.

Pin

A tool window can be pinned, which means that it will not slide into the edge when it loses focus, but it stays open.

Preset position

For a camera with a PTZ function, you can define pre-set positions in Ethiris. A pre-set position is a named position with pre-set coordinates for pan, tilt, and zoom. A preset position can be activated manually in Ethiris client by an operator, but also automatically through a script in the Ethiris server. PTZ tours are built up by a list of preset positions.

Product code

A key follows each Ethiris license and shall be entered at installation. Ethiris Server requires a product code at installation. Note that Ethiris Client requires no license key, and therefore there is no need for a Product code either.

PTZ

Pan, Tilt & Zoom. The standard designation for cameras with these functions.

Registration key

The key which uniquely identifies an instance of a program. The key is generated by clicking the Register button in the license dialog. This key must be sent to Kentima AB to unlock Ethiris.

Round

A type of camera view in which a list of cameras is created for automatic switching between cameras at a specific time interval.

RTP

Real-Time Protocol. The video transport protocol used on TCP/IP networks, most common for MPEG4 and H264 video.

Scale mode

Indicates how the frame in a camera view is to be displayed. The options are: Keep Aspect Ratio, Fill Display area, and Original size. The default scale mode is Keep Aspect Ratio, where the image is as large as possible without distorting the proportions (aspect ratio).

Section

A part of the system with its own set of view buttons and function buttons. Each section is represented by an item in Sections Explorer. A Section can consist of other sections making it possible to build hierarchies.

Tab group

Both Document windows and Tool windows can be grouped together and become tabs in a group. In this state, only one window at a time in the group can be visible. Click a tab to make the corresponding window visible.

TCP/IP

Transmission Control Protocol/Internet Protocol.

Test license

When Ethiris is installed, a test license is received with which you can test the product free of charge.

Timelines

Ethiris timelines are used in the Player for graphically visualize when there is recorded video for various cameras. Event recordings are indicated with red color, and continuous recordings are indicated with blue color.

Tool window

A Tool window is used for supplying the user with various tools such as a list of available sections, views, or cameras. In Ethiris Client there are four Tool windows. These are Sections Explorer, Views Explorer, Cameras, and Export Jobs.

Unpin

When you unpin a tool window, it will slide into the edge of the main frame when it loses focus, leaving visible only a tag with the name of the window.

User interface

The elements in a computer program with which a user works when using the program. What is visible on the screen, such as forms, dialogs, etc.

User operation

There are several user operations for which you can require authorization in Ethiris. Examples of user operations are "ViewLive" and "ClientStart".

Video encoder

A device that can be directly connected to a computer network. Its purpose is to convert one or more video signals to a format that can be sent on the network, for example, MJPEG.

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Mailing address:
PO BOX 174
SE-245 22 Staffanstorp
Sweden

Phone: +46 (0)46-25 30 40

E-mail: info@kentima.com

Visiting address:
Kastanjevägen 2
245 44 Staffanstorp
Sweden

Fax: +46 (0)46-25 03 10

www.kentima.com

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