INTELLIO VIDEO SYSTEM 4

User's Manual

(Version: 4.7.2.1)

Table of Contents

1 User's Manual

Operators are responsible for watching the live images continuously and take measures immediately in such cases. If something critical happened in the past the records have to be retrieved and such images have to be found on which the details of the critical event is visible. In some cases it could be necessary to export the videos or images of a crime.

This guide consists the introduction of those surfaces in the client program which are provide the possibility for live monitoring, playback and exporting the digital evidence. Furthermore this guide contains the introduction of those functions which makes the operators work easier and more efficient.

2 Client Startup

The client can be launched by clicking the **Intellio Client 4** icon.

In case a client is already running in the system, a notification window pops up offering users to select one of three options: switch to the running client *(without launching a new one);* close the other running clients and launch a new one; or launch a new client without interrupting the other clients.
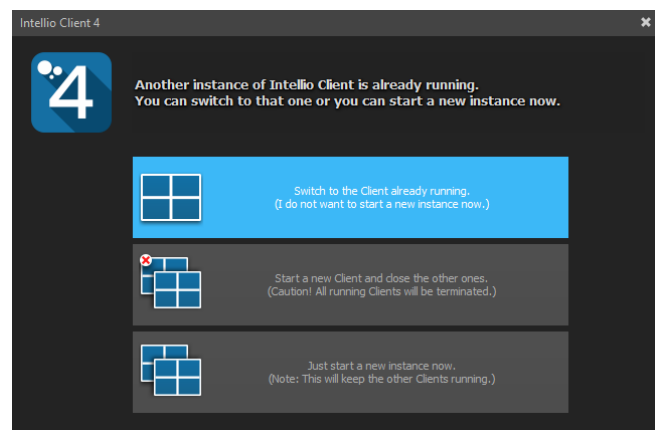
3 Login

To log in every operator has to enter their login name and password.

The steps of logging in are the following:

- Select the connection from the **Connection** drop down list.
- Enter the **Login name** and **Password**.
- Click button **Connect**.
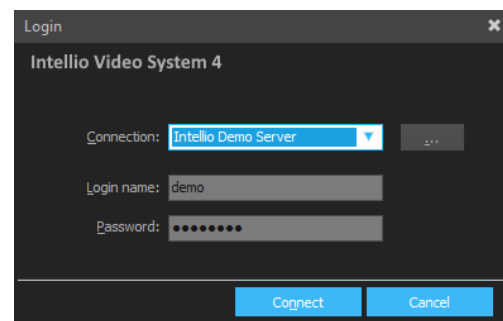
If a user has no authorization to a function, the client will inform about it.

4 Main Menu

The user interfaces of the IVS client can be reached through the hidden main menu. The main menu appears by clicking on the center of the clients title bar *(or when in full screen mode, on the upper center part of the primary monitor)*. The main menu hides automatically, when the mouse cursor leaves its area.
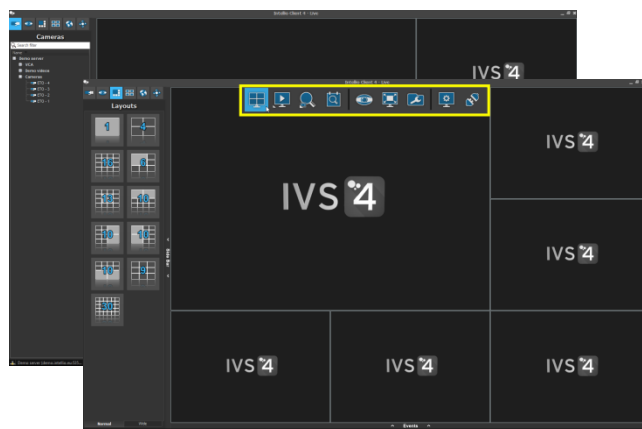
Main menu

4.1   Functions of the Main Menu

		Function key
	Live monitoring	F1
	Playback / Slideshow / Bookmarks	F2
	Intelligent Event Browser Motion Search / Object Search	F3
	Event Query	F4
	Load a View	-
	Fullscreen	F11
	System Configuration	F10
	Client Settings	-
	Connect to a Site / Disconnect	-

Alternatively the functions can be accessed with the use of the function keys.

5 Toolbar

The toolbar ensures availability to the tools belonging to active functions, can be found at the top left corner of the client window. The available tools change according to the selected function.

Switching between tabs can be done easily by using the shortcut **Ctrl**+**1**…+**7**. The toolbar's shortcuts will work on all interfaces that have a toolbar.

Cameras	Hierarchical list of the available cameras on the connected sites. Enables to select cameras to be displayed.
Views	List of the available local and global views, view sequences and management of them.
Layouts	List of the standard and widescreen layouts.
Map	List of the available maps in the system.
PTZ Control	PTZ control panel.
More	Shows the other panels.
Monitor Wall	List of the available remote monitors, which can be controlled from the client, and their settings.
Partitions	List of the available partitions, and their status. The status can be controlled from the tab.

6 Monitor Wall

By using the **Intellio Monitor Wall** it is possible to connect several dedicated client PC-s and monitors to the system. When a client runs in *Monitor Wall* mode, its layouts and the displayed cameras on them can be changed remotely through another client, so the controlling of a complex system from only one client computer becomes possible. To use the Monitor Wall please do the following:

- Start **Intellio Client**, but do not click Connect.
- Click on the **...** button.
- Select a connection to a server than click on **Shortcut for Monitor Module** button.
- Close the Client and use the created **shortcut** on the Windows desktop to start the client in monitor mode. The client will run in full screen mode.
- Now connect to the same server with another Client *(from another workstation)* and go to **Live Mode / Monitors**.
- On the upper left open **Registered monitors on sites**, than after a right click of the mouse **Refresh** the interface and select one of the connected monitors *(e.g. **Primary**).*
- To change layout or camera in one of the remote monitors, drag and drop it into the left upper corner monitors of the client *(from **Side Bar / Cameras**, **Layouts** or **Views**).*
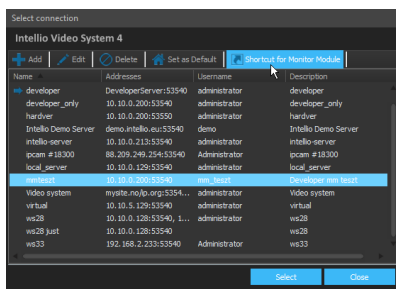
Creating shortcut for the Monitor Wall
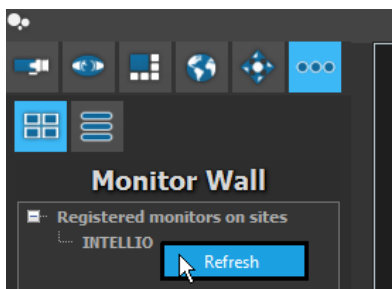
Refreshing Monitors

Changing Layout

Note: *in order to login automatically when connecting to the monitor wall, the username and password must be given for the used connection.*

The user account running the monitor wall client must have the following authorization:

- *Domain / View sites*
- *View / Video monitoring*
- *Cameras / Access to cameras (or specified cameras)*

7 Client Settings

The **Client Settings** window can be accessed from the main menu. This is where all client settings can be made, which affect the quality of monitoring and the mode of display, but do not influence the internal operation of the system.

7.1   Displays

The settings related to the displays can be found on the **Displays** tab. The screens displayed signal the number of possible displays. The number of displays being used currently can be lower, but the first tab is always active and cannot be eliminated.

Use this monitor for Intelligent Live View

If this option is enabled, the monitor will be used for Intelligent Live View.

The display devices can be renamed, while the client displays the information regarding each display. When using more clients in monitor wall mode, it is recommended to use unique names for all monitors, as the client uses these names in the list of the **Registered monitors on sites**

To easily identify displays, the client will display other information provided by the operating system.

7.2   General

The settings related to the display functions can be found on the **General** tab. In addition, the settings interface for the calibration of the joystick can also be accessed from here.

7.2.1   Live

Turn off reduced frame rate in Spots

If this function is enabled, all settings resulting in an fps reduction in the video of the **Intellio** cameras displayed on the Spot panels will be temporarily suspended.

Show "Add License Plate" button on main screen

If this function is enabled, a button appears on the left bottom part of the live screen, which can be used to add a new license plate to the database.

7.2.2   Alarms

Disable dropping cameras to spot on alarm

This function disables camera images from being displayed on the Spot panels in case of alarms.

Disable changing view on alarms

The alarms triggered by detectors can be assigned a view change. Any view change previously assigned to an alarm can be disabled here *(e.g. in case of monitor walls)*. Find more on the view change triggered by alarms in the chapter General Description of a Detector in the *IVS4 Installation Manual*.

View changing time on multiple alarms

In case there are multiple concurrent alarms, the client program will keep switching between the views affected. Here you can set the time interval between view switches.

Enable acknowledging of alarms remotely on Monitor Walls

By enabling this option, when acknowledging the alarms, they will also be acknowledged on the connected Monitor Wall clients.
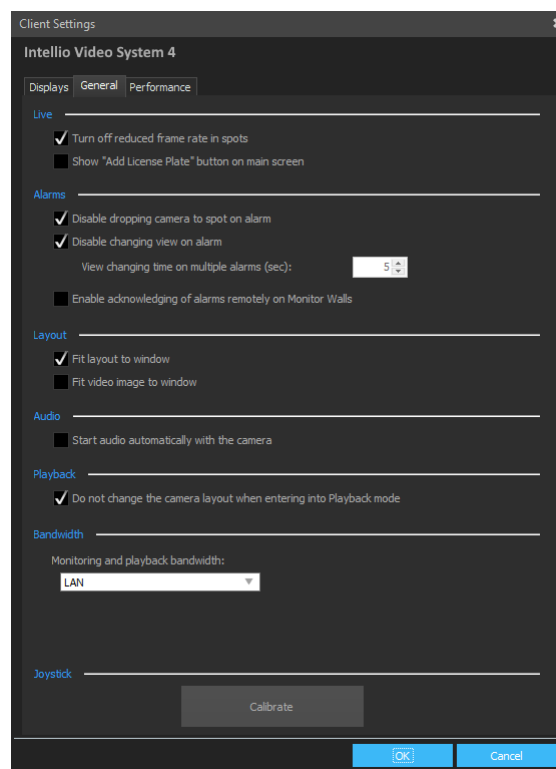
7.2.3   Layout

Fit layout to window

This function enables the dynamic resizing of panels and adjusting them to the proportions of the screen.

Fit video image to window

It fills the panel completely with the images transmitted by the camera. Consequently, it may result in the distortion of the image proportions.

7.2.4   Audio

Starting audio playback along with the corresponding camera

This function enables automatically selecting an audio input assigned to a camera when that camera is selected in live video or playback. In other words, the audio assigned to the camera will start when the camera is in live video mode. In playback, the audio input track will appear on the timeline, with the audio starting when playback starts. If this option is disabled, the audio input needs to be selected manually.

7.2.5 Playback

Do not change the camera layout when entering into Playback mode

Select this to have all cameras from the live video displayed in playback mode. When left unselected, the camera displayed is the camera of the active panel, or - if unavailable – that of the Spot panel. In the lack of either of these, the first camera of the layout will be displayed.

7.2.6 Bandwidth

Depending on the available bandwidth a limit can be set for the client, a value to be adhered to by the images transmitted for surveillance or playback through the automatic decreasing of the refresh rate or increasing of the compression rate. These settings are recommended to be changed on clients where monitoring and/or playback is done online or through private networks with a low bandwidth. This way, monitoring or playback of multiple cameras simultaneously will be uninterrupted. Restricting the bandwidth also automatically disables the Views and Layouts, whose usage are not viable with low bandwidths.

The bandwidth of the connection between the server and the client can be selected from a dropdown menu. The set value will be approximated from the lower end by the system. Upon playback this bandwidth is applied to the images transmitted to the client.

7.2.7 Joystick

Calibrate

Opens the settings interface to calibrate the joystick connected to the client.

7.3 Performance

7.3.1 Global

Optimize to performance

If this function is switched on, all the camera images which are not on the Spot panel will be transmitted through the secondary video channel, disregarding the other conditions required for secondary video channels. Thus, the live video displayed will display the images of the secondary video channel, except for the cameras on the Spot panel.

Turn off camera image cache

If this function is enabled, the images from cameras used at least once will not be remembered, resulting in a slightly slower views switch and reduced memory usage.

Disable events slideshow at the livescreen

This function disables the event images in the **Events** dropdown menu, resulting in lower memory consumption.

Turn off YUV full range color correction postprocessing

This function disables the post processing of images, resulting in lower power consumption on client side.

7.3.2 Playback

Disable the automatic refreshing of the timeline

This function disables the automatic refreshing of the timelines on the playback interface.
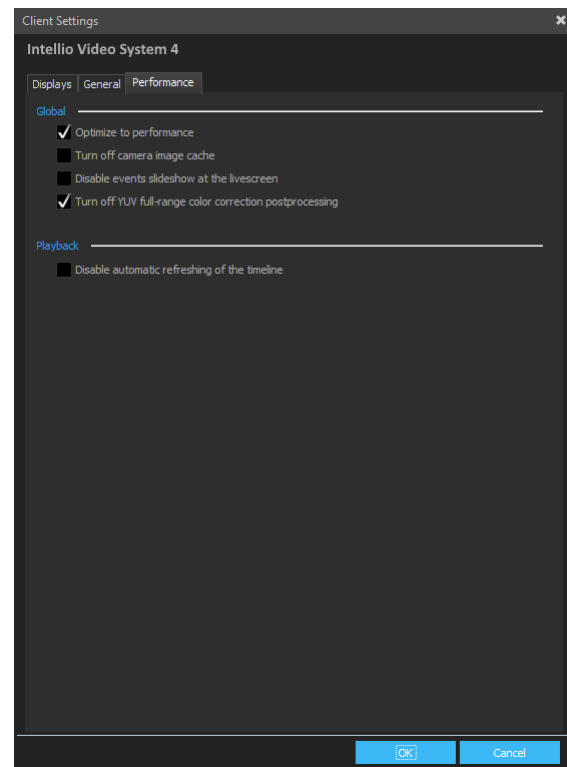
8 Live Monitoring

Live mode surface is for live monitoring. To open the surface click on *Live* mode button on the main menu, or press the **F1** function key.

In non-full screen view the hidable **Events** panel contains images of the events *(or the event descriptions themselves when clicking the appropriate tab).* Double-click the event image or the corresponding event to view the playback menu with the camera, the detector corresponding to the event and the metadata of the particular detector.
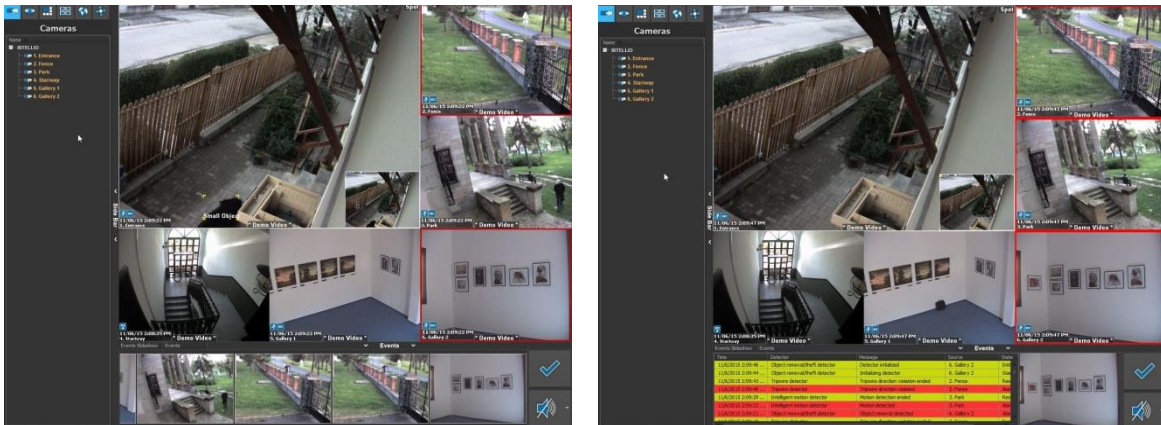
8.1   The Status Icons of the Live Video

During monitoring there are several bluish icons that can be appearing in the lower left corner of the feed. These icons relay important information about the state of the cameras and the status of the data stream. Here are some explanations:

Motion Detection. The icon appears if the motion sensor detects movement.

Recording. When this icon appears, the image is stored on the server. Most often it accompanies the motion detection icon, especially in motion based storage mode.

Reduced FPS. It appears if the camera automatically lowers its frame count.

EPTZ. It means the camera uses its native resolution, and shows a part of the whole image without image degradation. This is an onboard function, so while this function is active, every detector using image processing is disabled.

DPTZ. Basically digital PTZ, a client-sided function, which allows the detectors to work undisturbed. It signals the operator, that the displayed image is just a part of a bigger area.

8.2   Camera Menu

When the mouse cursor is over the camera image, a toolbar appears on the upper section of the camera image. This is the camera menu which provides quick access to a number of camera functions.

Camera Settings. The most important settings of the camera can be adjusted here, e.g. video, image compression, motion sensor, detectors, etc.

Meta Data. Displaying the visual information *(meta data)* of detectors belonging to a camera.

IntelliZoom.

Saving Frames (export).

PTZ Presets.

PTZ Guard Tour.

E-PTZ.

Monitor panel functions: **FPS Display, Spot Management, Monitor Panel disabling, Camera Navigation**.

Downloading Original Frame *(only in case of playback, in case of low bandwidth)*.

Manual Entry *(in case of license plate recognition detectors)*.

Jump to Playback.

Audio. Switch on/off audio belonging to a camera.

I/O operation. Control the ***Multi I/O*** outputs or ***Execute programs*** assigned to the camera *(select from the pull-down menu for more than one operation)*.

8.3　Selecting Monitor Layout

Depending on how many cameras wants to be monitored simultaneously you can select the most convenient monitor layout. It is possible for every operator to create their own layout with the help of the **Views**.

To select a layout, from the **Live / Layouts** menu drag a layout and drop it to one of the monitors.

8.4　Spot Panel

The Spot panel is a designated place, primarily to make alarm events easily identifiable by immediately showing the live image of the place where the alarm event occurred.

In the **Intellio Video System 4** the location of the Spot panel is freely changeable, the suggested places in the layout can be deactivated, and others activated. There is no limiting in any way.

To enable or disable a spot panel, move the mouse to the camera menu *(it will not work with an empty panel),* click on the 🖥 monitor symbol, and choose the **Spot** option. To determine whether a camera is in a Spot panel or not, just check the upper right corner of the camera image. If there is a **Spot** designation there, then the function is active.

The priority of an alarm defines its appearance in the Spot panels. If a high priority and a low priority alarm arrive at the same time, and there is only one Spot panel, only the high will be shown. If there is some time between them, the higher one will override the lower one, displaying it. The lower priority alarm will only show up, if there was no higher or equal priority alarm in the near past, and just until a higher priority alarm arrives to override it.
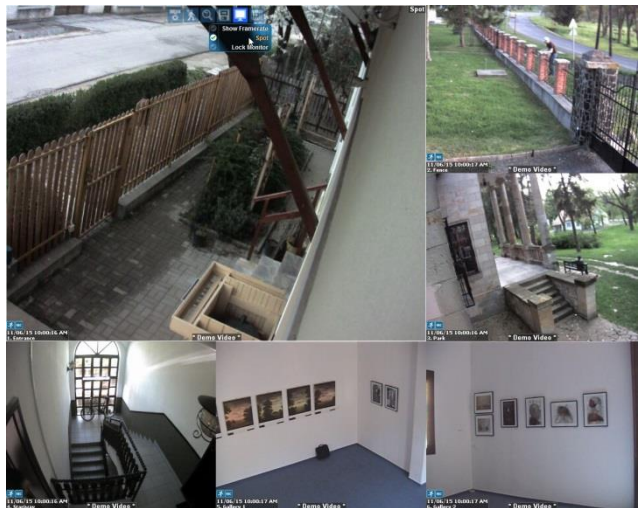
8.5   Selecting Cameras for Monitoring

Select **Live / Cameras** than drag a camera or a camera group and drop it in one of the panels of the layout.

Multiple cameras can be dragged onto the panels simultaneously. Just grab the first camera then keep the **Ctrl** key pushed down while dragging the cameras. The selected cameras are the ones following the first one in the list of cameras (in **Side Bar**). The number of the selected cameras equals with the number of the possible panels (in one monitor, the highest number).
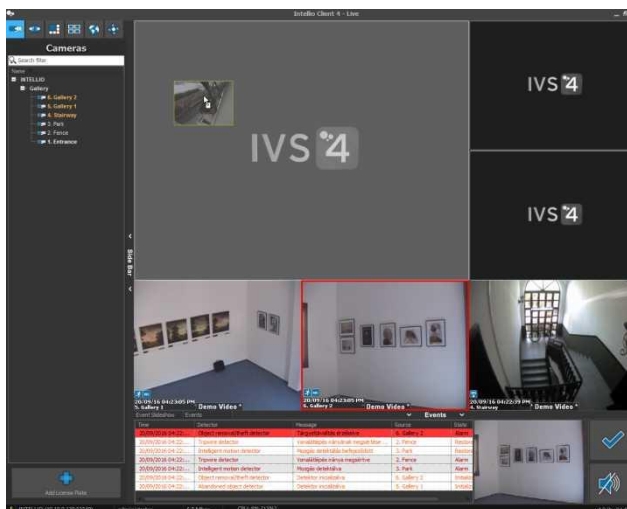
The names of the already monitored cameras appear with bold text in the list .

If you want to remove the camera image from a monitor; drag the camera, and drop it without the area of monitors.

8.5.1   Quick Search for Cameras by Name

You can easily and quickly find the camera you want to display – even in the case of hundreds of cameras – with the help of the search box found on the top of the camera panel. Click on the magnifying glass icon to fade or hide unmatching items.
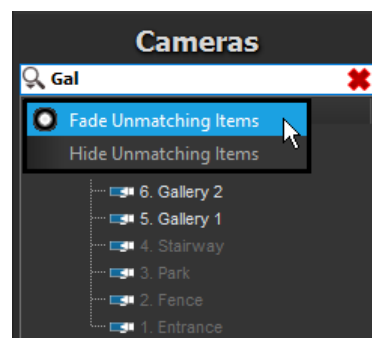
8.5.2   Selecting Cameras by Keyboard

You can also move cameras in the selected panels using specific keyboard keys. These are the steps:

- Select a panel by its number. The panels are numbered from left to right, from up to down. (If there is more than one monitor, then the first number is the number of the monitor, and the others are the selected panels on the monitor.)
- Enter the panel's number (for example: 10, or 1 10 when using multiple monitors to put it on the first monitor).
- Hit key **M**.

After this, the panel is selected, framed white.

- Hit the selected camera's index number. This number can be configured in a pop-up window from the **System Configuration / Devices / Cameras** menu. The **Edit Index List** button calls up the window.
- Hit key **C**.
- The selected camera will appear on the selected panel.

The cameras to be selected are always the cameras registered on the Site of the primary login, the index list of other Sites are disregarded in order to avoid clashes.

8.6   The Secondary Video Stream

In cases of some cameras the IVS is capable of using a second – e.g. lower resolution – video stream, providing optimal usage of client resources. The IVS uses the secondary video stream for display in the following cases:

- Optimize to performance enabled and monitoring takes place on one monitor with more than six panels.
- Optimize to performance enabled and monitoring takes place on two or more monitors with more than four panels on the display.
- The IntelliZoom function is not active.
- The DPTZ function is not active.
- The Magnifier function is not active.
- It is not a Spot monitor.

If any one of the conditions above are unfulfilled, the image displayed is transmitted via the primary image stream.

8.7   Double Click on a Panel

The function of a double click on a panel depends on the displayed layout, and the settings of the desired panel. If you double click on a Spot panel, the camera will go to 1 panel Spot view. By double clicking on a standard panel, the camera will go to a Spot panel, in order to first provide high resolution display of the primary video stream. If the layout does not contain a Spot panel, the camera goes to 1 panel Spot view. If you double click on the 1 panel view activated this way, the original layout will be reset.

8.8   Displaying OSD Metadata

Metadata collected and stored by IVS help to check the proper working of the system. The available metadata depends on the type of cameras. The Intellio cameras offer the most metadata which are related for example to motion detectors, tracker, and detectors. In case of other cameras *(e.g. ONVIF, RTSP Stream, Axis etc.)* the metadata are pretty limited.

By clicking 🚶 icon of the camera menu, displaying of metadata is controllable per camera. By selecting icon, the menu of the metadata related to the camera appears.

8.8.1   Metadata of Intellio ILD Camera

- **OSD**: working parameters of camera *(e.g. properties of image and camera, server information etc.)* in grouped way.
- **Monitoring**: information of motion detector which controls live monitoring of camera.
- **Tracking**: information of tracker.
- **Recording**: information of motion detector which controls the recordings of camera.

The detectors of the camera can be found in the menu if they exist and their metadata are also displayable.

More information can be related with one type of metadata, and in this case by selecting the metadata a submenu is appearing where the information are switchable.

The menus of actually displayed metadata are marked by a green check before the menu items.

8.8.2   Displaying Stopped Objects

In case of appropriate environment, the tracker of ILD cameras is capable of detecting the stopped object, and adapts the slow changes of images, so tries to keep the stopped object as long as it can. For objects detected in this way, IVS makes it possible to display the duration of stops, and playback footages which are related to appearing and stops directly.

To mark the stopped objects simply enable displaying the tracker from the camera menu. The stopped objects appear with orange marker. Move the mouse hover a marked object, and the information of stop is appearing.

By using the button it is possible to playback directly the footage of object appearing, while the button is related the footage of object stopping.

8.9 Camera Navigation

With this feature you can set up clickable on-screen arrows with the help of which it is possible to efficiently navigate between the cameras. The camera navigation works both in live view and in playback mode. You can enable the feature from Monitor panel functions 🖥 menu. The visibility of the captions appearing under the arrows can also be configured in this menu.
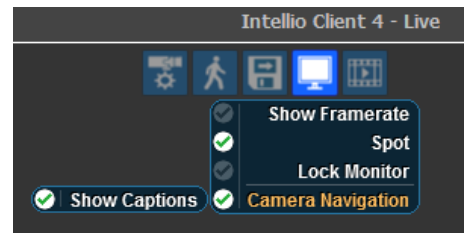
If camera navigation is enabled, and if the mouse cursor is on the image, then the arrows will be displayed transparent blue. Moving the mouse cursor over an arrow will make the color of that arrow darker and will make the caption *(if it is enabled)* appear. Clicking on an arrow will switch to the camera image that was associated with it. If the camera image that you switched to with the help of the arrow also contains an arrow, then you can also click that arrow and continue navigation. As a result of this, a virtual tour of the site can be completed if the arrows are set up correctly.
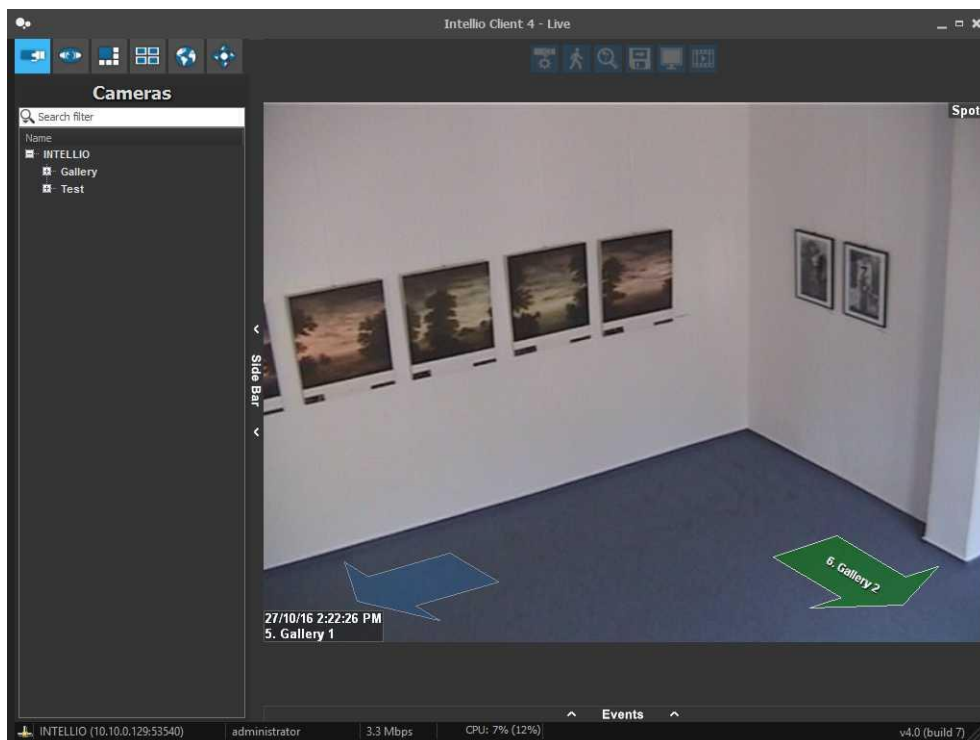
Arrows that switch back to the previous camera will appear green *(if there's any).*

Note: *the PTZ camera control takes precedence over camera navigation. If the arrows are placed in the PTZ control circle, they will not work.*

8.10 Selecting Audio Channels

Audio inputs can be enabled to sound concurrently with their corresponding live video. If the audio input is assigned to one of the cameras, it can be switched on/off from the camera menu belonging to that camera image. If the audio input is not assigned to the camera, switch it on/off using the checkbox next to the required item in the **Audio Sources** list at the bottom of the **Side Bar / Cameras** menu.

8.11 IntelliZoom

The IntelliZoom function in the camera menu allows for the automatic tracking and zooming of moving objects. The **Source** allows the user to adjust which type of moving objects the zooming function should respond to *(by default it is the objects detected by the Tracker),* while the **Settings** options are used to adjust the display of the function on the screen.

The settings of IntelliZoom do not affect either the recorded footage or the operation of the detectors.
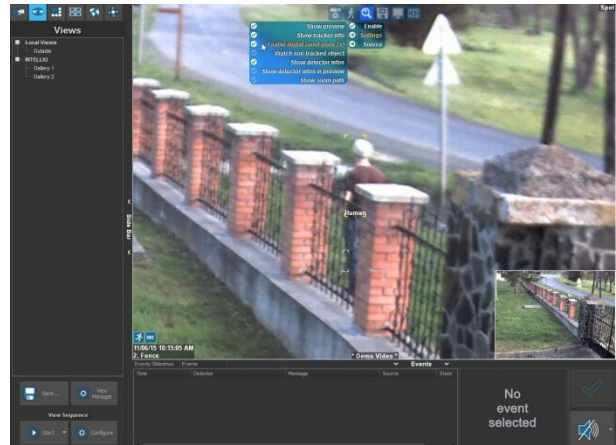
8.12 DPTZ

It is recommended to use the DPTZ function if you wish to inspect a specific part of the camera's field of view without interfering the operation of the camera *(unlike using EPTZ function, where the zoomed-in image displayed will be recorded as is),* or if you wish to display the zoomed-in area on a separate panel. It's also possible to display a part of the full image as an individual image on the client.

The digital PTZ behaves as a camera preset: these presets can be saved as views, so it is possible to monitor various zoomed-in views of the same camera on two or more different panels. These zoom positions can also be saved and reloaded later. The function does not affect recording; the entire field of view will continue to be stored.

Using the DPTZ is easy; just select a camera, then press down the **Shift** key while zooming in or out on a selected area with the mouse wheel. The observed area can be adjusted the same way – by pressing Shift and the left mouse key. The active status of the function – even during playback – is signaled by the DPTZ icon in the lower left corner of the panel.

The EPTZ and the PTZ functions are temporarily suspended when the DPTZ function is in operation. Consequently, neither the EPTZ, nor the PTZ movement and zoom functionalities remain operational.

8.13 Controlling the PTZ and EPTZ

The PTZ and the EPTZ can be controlled in the monitors with three different ways.

Mouse

- If moving the mouse on the monitor area of the PTZ / EPTZ camera, a green cross will appear.
- The near vicinity of the cross it will be flashing indicating that the PTZ / EPTZ became movable.
- To move the camera, press the **left mouse button** on the cross and move in the desired direction.
- The green arrow shows the direction of the movement *(pan and tilt),* the length of it represents the movement speed.
- Use the mouse wheel for zooming.
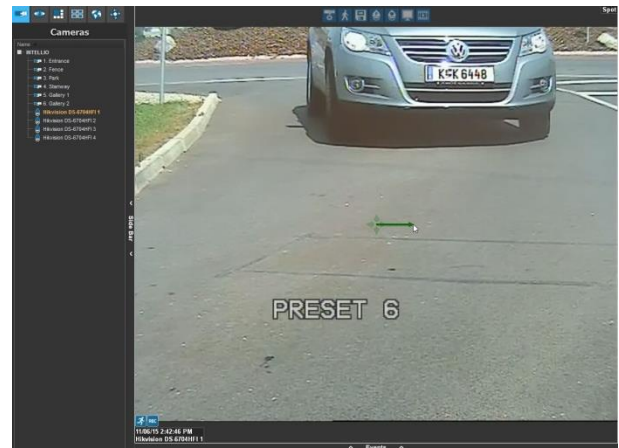
There is an alternate usage of the mouse, if the PTZ / EPTZ camera is able to use it. It is called *center point selection*, which means clicking on anywhere on the monitor will result in the PTZ / EPTZ moving in a position where the previously selected point will be in the middle of the surveyed area. If the camera supports center-point selection, it can be enabled in the **Side Bar / PTZ Control** panel.

Joystick

- Select a camera *(camera index+**C**, or panel+**M**),* then use the joystick to control the camera.

The joystick calibration can be found in the **Client Settings / Misc** tab. It should work without it on default settings although.

Keyboard

- Select a camera *(camera index+**C**, or panel+**M**).*

- Use the cursor keys to pan and tilt the camera, and the **+** and **-** keys to zoom.

- Be advised that the camera movement speed is variable depending on how long the arrow keys are pressed down.

With the EPTZ function it is not possible to set the **Presets** and the **Guard tours**, but the function is aborted by the camera after one minute of idle operation, and returns to normal mode.

8.13.1 Presets

The important positions of the PTZ can be saved by following these steps as Presets:

- Move the PTZ camera in the selected position.
- Move the mouse above the camera view.
- From the appearing camera menu select the ![P] symbol.
- Click on the **Create preset** function.
- In the appearing window enter the name of the preset.
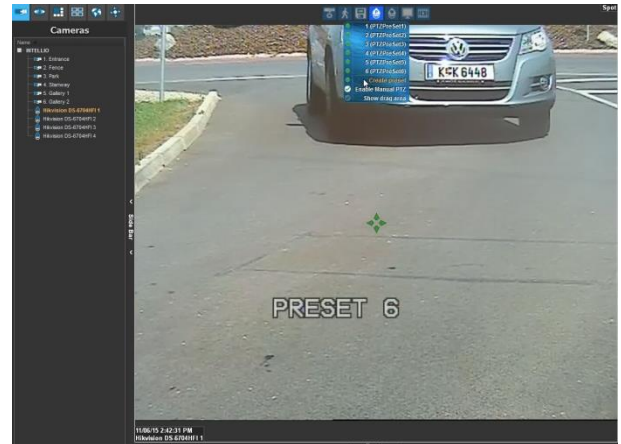
To load a preset:

- Move the mouse above the camera view.
- From the appearing camera menu select the ![P] symbol.
- Select the name of the preset, and click on it.

8.13.2 Guard Tour

The PTZ can automatically jump to existing presets and jump to the next one after a certain time. To configure the **Guard Tour**:

- Move the mouse above the camera view.
- From the appearing camera menu select the **Configure Guard Tours** ![icon] function.
- Click button **New Tour**.
- Enter the name of the tour.
- In the **Selected Tour** tab select the name of one of the Preset from the drop down menu.
- Set the **Waiting interval** after the PTZ will jump to the next preset in the list.
- Select an optional number of Preset by clicking on **Click here to add preset**, and set the interval to them.
- Click **OK**.
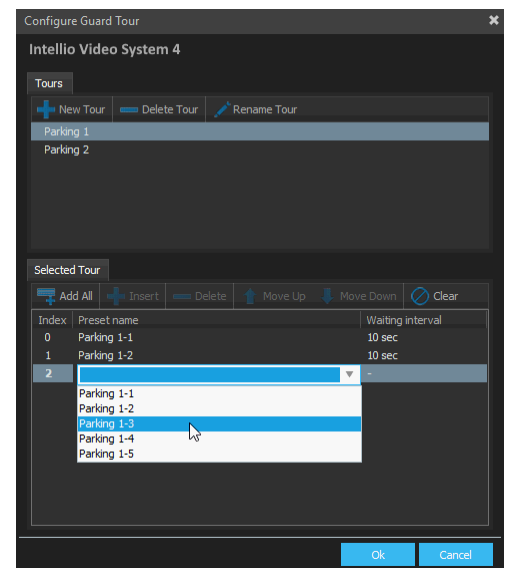
After this the Guard Tour mode can be enabled. To this, go to the camera menu, select the same icon like you did the last time, then select the guard tour's name you wish to activate. To stop the tour, click on the **Stop PTZ Guard Tour** option.

8.14 Views

The frequently used layouts with the assigned camera can be saved as a **View**. The views can be saved, loaded, sequenced and edited *(name and type only)*.

8.14.1 Save, Load and Edit Views

When creating a view, it has to be decided whether the given view can be accessed from other client terminals. If the view can only be accessed from the particular computer *(default),* then it is **Local**, otherwise it is a **Global** view. Global views require that the views are assigned to a Site, since not every Site has access to the cameras of the others, so it would be pointless to create a view monitoring the cameras of multiple Sites at the same time *(there are some exceptions, e.g. with full administrator authorization, but these must also be assigned to a specific Site).* Saved views can be loaded with one click.

The process of saving:

- Arrange the cameras as needed.
- Set the spot panels, OSD, DPTZ, and any other displaying parameters which you want to save.
- Select the **Save...** button in the **Views** menu of the side bar.
- Enter the name of the view and enable the global view if necessary *(local views can be loaded only on that client where the view had been saved, global views can be loaded by every operator who connects to the same site).*
- When in global view, select the Site onto which you want to create the view.
- Select the **Save audio source states** checkbox *(if necessary),* then click on the **OK** button.
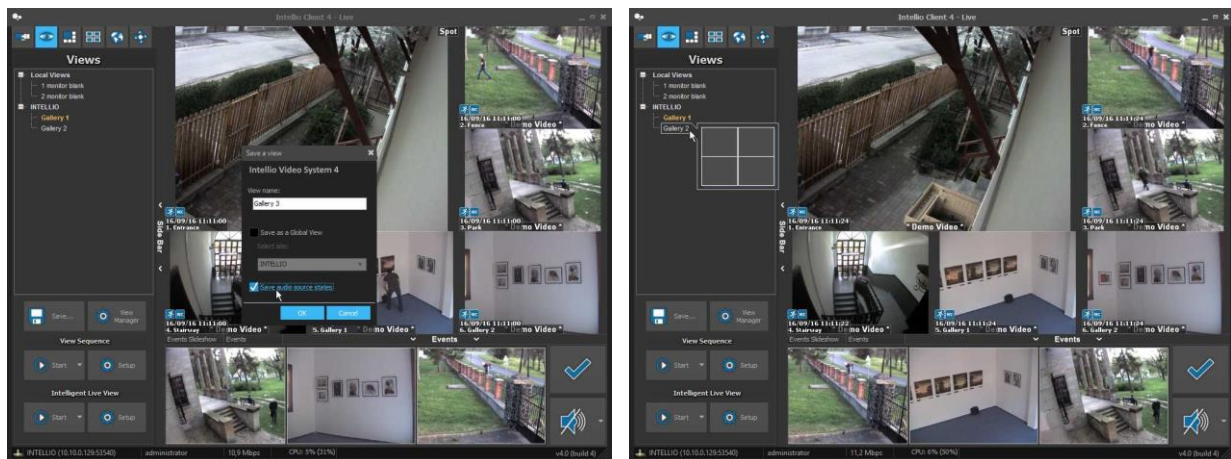
Saved views are listed under the **Side Bar / Views** menu point of the sidebar. They can be loaded by double clicking on their names. The saved views can be loaded by entering their number too. Simply enter the number of the view *(listed in inceasing order),* then hit key **V**.

To delete or edit a view, move the mouse button above the view name on the view's list, click the right button of the mouse and select the desired option. Only the view's name can be changed here. If you wish to edit the view, you will need to open the **View Manager**.

8.14.2 View Manager

The View Manager can be opened with the identically called View Manager button on the **Views** menu point of the sidebar. When editing, depending on the user authorizations, each view of the Domain can be changed, deleted, renamed, regrouped, while the listing of the views can altered, too.
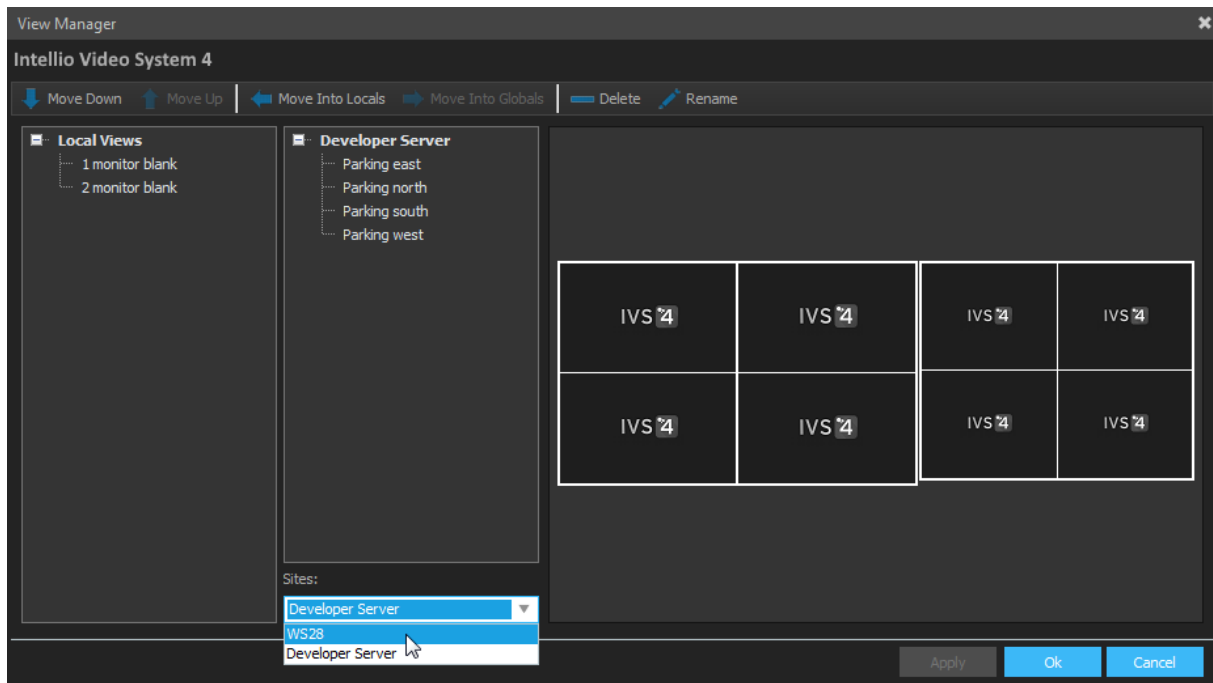
8.14.3 View Sequences

Views can be changed automatically. To do this, it has to be configured:

- Select **Live / Views**.
- Click on button **Configure**.
- Select or create a sequence, then add the views and the interval to it.
- After added all the views and the intervals press **OK**.
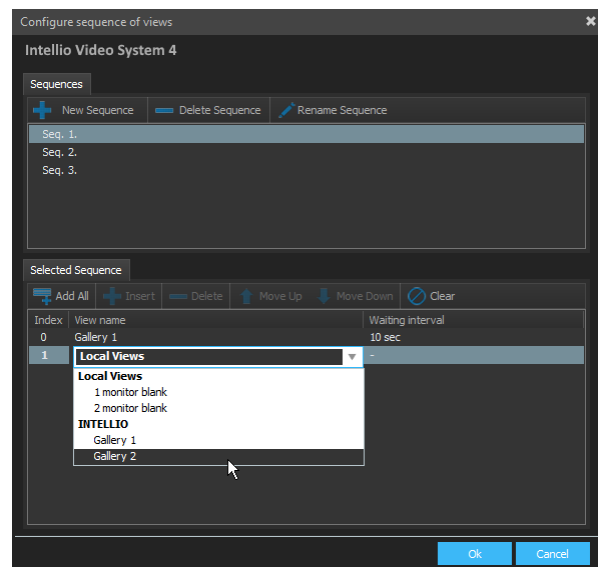
8.15 Intelligent Live View

The Intelligent Live View function assists in effectively monitoring the cameras that are in an alarm state. When this function is used, the system will dynamically change the layouts and the cameras that are displayed. The live views of the camera's that are in an alarm state have priority over the rest. This feature is helpful when the majority of the cameras usually observe no movement.

When using the Intelligent Live View Function, it is possible to configure which stream should appear in a fixed position and which should be handled dynamically. More than one configuration can be created. It is also possible to choose which configuration we want to activate.

Before using the Intelligent Live View function, you will have to configure which monitors should have the function enabled, see **Displays** (page 8).

Note: The **Intelligent Live View** and **View Sequences** are mutually exclusive, i.e. only one of the two functions can be active at a given time.

8.15.1 Managing Intelligent Live Views

To manage the Intelligent Live Views select the **Views** panel on the toolbar. Click on the **Settings** button on the bottom of the panel (**Intelligent Live View part**). You can create, delete and change the Intelligent Live Views in the popup window. There is a toolbar for the functions on the upper part of the window. The next section of the window contains a list of the created Views grouped by SITE. How the cameras are displayed can be separately specified for all of the views The checkboxes can be used to control the presence of the cameras (always, only alarm, never). The **Wait before Camera / Layout**

change back (sec) setting controls how much time (in seconds) has to elapse before the camera disappears from a view, or before the system reverts to a layout with less views.
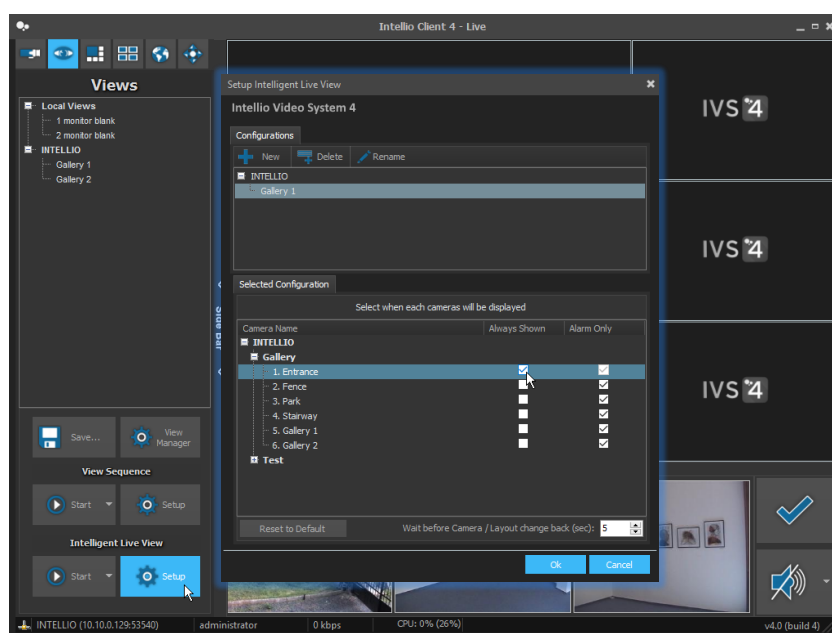
8.15.2 Creating an Intelligent Live View

- Open the ***Intelligent Live View settings*** window.
- Click on the ***New*** button.
- Type the view name in the popup window.
- Set the parameters of the view and the cameras *(by default all the cameras are set to* ***Alarm Only****)*.
- Save the view by clicking the ***Ok*** button.

8.15.3 Changing an Intelligent Live View

- Open the ***Intelligent Live View settings*** window.
- Select the view you want to change.
- Change the necessary parameters of the view and the camera.
- Save the changes by clicking on the ***Ok*** button

8.15.4 Deleting an Intelligent Live View

- Open the ***Intelligent Live View settings*** window.
- Select the view you want to delete.
- Press ***Delete*** to delete the view.
- Save the changes by clicking the ***Ok*** button.

8.15.5 Activating an Intelligent Live View

To activate an Intelligent Live View, select the ***Views*** panel on the toolbar. Click the ***Start*** button on the bottom of the panel *(Intelligent Live View part).* Select the desired Live View from the popup menu.

8.15.6 Stopping an Intelligent Live View

You can stop an active Intelligent Live View by doing one of the following:

- Click the ***Stop*** button on the bottom of the ***Views*** panel *(Intelligent Live View part).*
- Drag a layout or saved view to the monitor where the Intelligent Live View is active.
- Drag any camera to the monitor where the Intelligent Live View is active.
- Start any view sequence.

8.16 Full Screen Mode

To switch between normal and full screen mode, click on the **Fullscreen** ⬜ button or press **F11**. By pressing the **Esc** button on the keyboard the client switches back to normal mode.

In full screen mode only the current view is shown, the toolbar is not displayed on the left side of the screen, alerts are not displayed on the bottom of the screen, nor can alerts be confirmed.

8.17 Zooming (Fast Zoom)

By pressing the **Ctrl** button you can zoom in on the images. If you press the **W** or **S** buttons or scroll with the mouse you can increase or decrease the range of zooming.

This type of zooming works on every camera, since it is a client-side digital zoom, but this is the reason why the resolution of the magnified area will be poor.
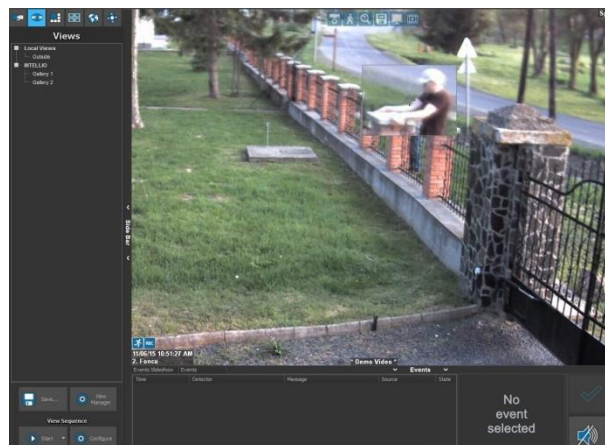
Note: zooming does not work simultaneously with the DPTZ function. Therefore, if the DPTZ icon is displayed on the panel, this function will not work.

8.18 Exporting or Printing an Image

During the live monitoring or playback it is possible to print or save a certain image to the hard disk. The compression i.e. the format of the image can be selected from the common *(JPEG, BMP, PNG)* types, and **DDS** *(DirectX Surface Format).*

The steps of exporting an image are the following:

- Move the mouse over the camera image from what you want to export an image.
- Select the **Save Image to File** [icon] option from the camera menu.
- On the appearing **Export frame** pop-up window shows a small preview of the picture. With the help of the **Apply client adjustment** checkbox the client filter can be used on the image.
- By selecting **Draw metadata** checkbox, the metadata information *(detectors, masks)* will be displayed on the exported image.
- If **DPTZ** feature is active on the panel, by selecting **Apply Digital Zoom** checkbox, the size of the exported image can be changed between enlarged and original.
- Click on **Save...** button to save the image.
    o In **Save as** window enter the name of the image *(default naming: camera name_yymmdd_hhmmss),* select the file type and click on **Save** button.
- Click on **Print...** button to print the image.
    o Select the printer you want to use in the **Print** window. If necessary change the properties of the printer, set number of copies then press **Ok** to start printing.
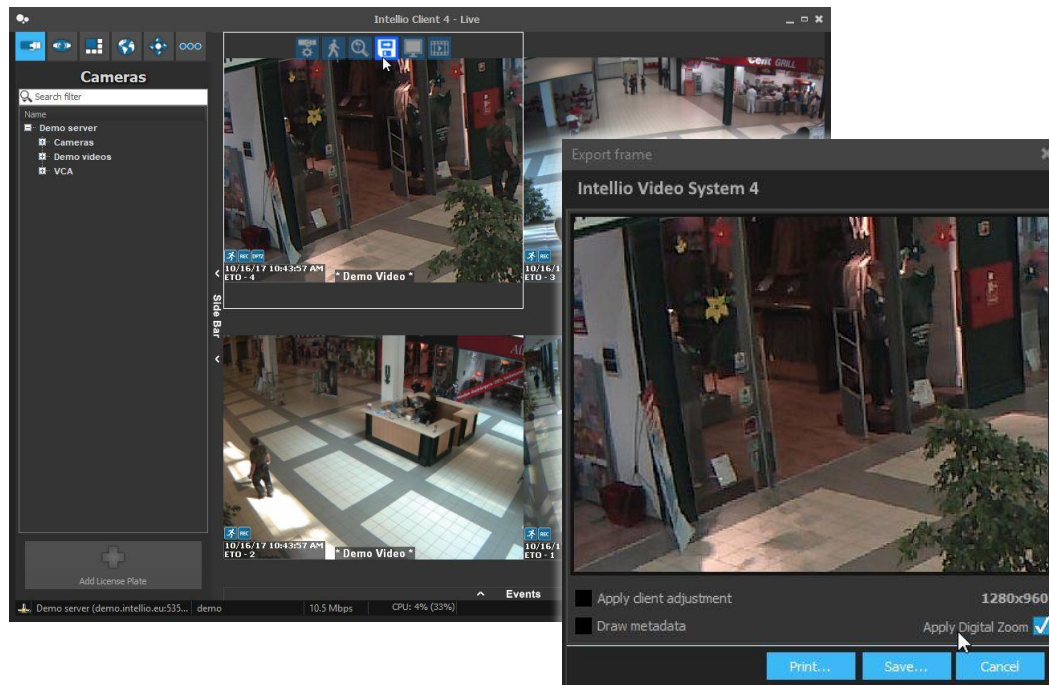
8.19 Manual Entry

This function can be used for vehicle access control based on the vehicle's license plate. In case a license plate is falsely recognized or not recognized at all by the automatic process, select the **Manual entry** icon from the camera menu to enter the correct license plate number manually and grant access to the vehicle.

8.20 I/O Action

By clicking on the I/O icon of camera menu it is possible to activate associated **Multi IO** or **Launch program** actions by manually. This feature makes it easy for the operator to launch different actions *(e.g. barrier opening, evacuation, etc.)* directly from the camera panel based on the image content. Multiple actions can be assigned to one camera, and the actual action can be selected from the dropdown menu by clicking on the icon. In case of one assigned action, the I/O icon directly launches the action. You can assign actions to cameras on the **System Configuration / Alarm / Actions** page, by selecting the desired **Multi IO** or **Launch program** action.
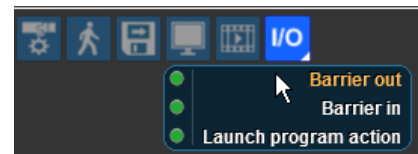
8.21 Controlling Partitions

By using **Side Bar / Partitions** (**Ctrl+7**) panel, the operator can change the status of partitions directly, thereby configuring the behavior of the system *(e.g. execute actions, notifications of alarms and events, etc.)*. By selecting the panel, the appearing list contains all the enabled partitions grouped by SITE.

The status of each partition is indicated by colors:

- orange: the partition is armed.
- grey: the partition is disarmed.

To change the status of a partition, hover the mouse over the partition, then change the appearing switch to the desired status.

Note: *the status of partitions can be changed by the scheduler, so a manual setting can be overwritten at any time by a scheduled command.*

9 Playback

To playback the recorded footage select the **Playback** mode on the client toolbar or press down the **F2** function key.

Depending on the client settings the playback interface has either one camera or all of the cameras of the live monitoring on display.

The footage of any particular camera can be played back from the camera menu of the live video by clicking on the ▣ icon.

On the **Side Bar** you can switch between the **Cameras** and the **Playback** menu points with the **Tab** key.

9.1   Selecting Cameras for Playback

The cameras and audio source selection are similar to live monitoring. Select an appropriate layout *(**Side Bar / Layouts**)*, then simply drag the cameras from the **Side Bar / Cameras** list to a desired panel.

Detectors can also be selected for playback, if this is the case, the events of the selected detectors are displayed in the event list and on the timeline. Detectors assigned to the camera are displayed at that camera. If you want to display the detectors, click the **+** button next to the camera, then select the desired detectors. The detectors can also be switched on or off with the **Detector Event** menu item found in the menu of the selected camera.

The independent detectors *(detectors not assigned to a camera)* can be found under the **System detectors** node.

The audio sources which are assigned to cameras are switchable from the camera menu, which is found on the top of the camera image. The independent audio sources can be enabled by the checkboxes next to the items found on the **Audio Sources** list, which is at the end of the camera list.

To select cameras quickly, use the saved local or global views.

Note: *A maximum of 16 cameras can be played back simultaneously. The layouts and views cannot be used for playback if they contain more than 16 panels.*

9.2 Selecting the Date of Playback, Timeline

The **Side Bar** on the left side, or more closely the **Playback** menu point is for controlling the playback. From the calendar above the month and day of the playback can be selected. By clicking on the clock *(below the calendar),* the exact hour and minute can be set where from the playback will start. After defining the time the horizontal white line in the timeline shows the actual time of playback. By using the timeline it is possible to move smoothly between the footage and also it can be noticed where are recorded footage. During playback the actual time is displayed with a horizontal white line.
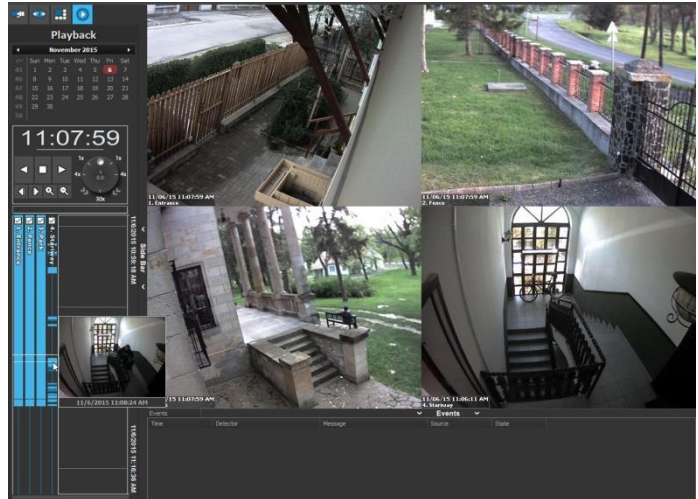
The color of the vertical axis of the timeline indicates the type of the buffer.

- Light blue: normal buffer
- Dark blue: long-term buffer
- Red: emergency buffer
- Gray: archive buffer

| normal buffer | long-term buffer | emergency buffer | archive buffer |

9.3 Moving on Timeline

By using the timeline it is possible to navigate between recorded footages. To move the timeline, click on the timeline and scroll with the mouse or hold down the right mouse button while moving vertically *(when playing back the footage of more than 10 cameras, you can also move the timeline left and right).* If you are moving the cursor above the timeline and double click, the playback jumps to that time.

The time interval on the timeline can be increased / decreased - from 15 minutes to 24 hours - by clicking on the **Zoom out** 🔍 / **Zoom in** 🔍 button. After that you can move with higher / lower scale between the footage. It is possible to move between one by one between the events. To jump to the previous / next event click on **Previous event** ◁ / **Next event** ▷ buttons. The cameras and detectors irrelevant during the quick jumping should have their checkboxes unselected *(e.g. a camera and the events of the detector are to be examined, but without looking at every frame. In this case the checkbox above the camera is unselected, so this way we will only jump between the detector events).*

In case you wish to skip only one frame, use the left and right arrow keys. These buttons work on the playback interface even if the playback menu is not the active function. The only exception is the roll down panel of Events. In case this is the active panel, the right-left arrow keys are inactive, while the up-down keys will jump from event to event.

9.4   Playback

To control the playback, use the panel on the left side of the playback screen.
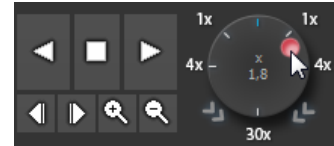
◁	Play backward by 1x speed.
☐	Stop playback.
▷	Play forward by 1x speed.
◁ǀ	Jump to the previous event.
ǀ▷	Jump to the next event.
⊕	Decrease the timeline interval.
⊖	Increase the timeline interval.

Changing playback speed between 0-30x, forward and backward. Values between 0-1 result in slower, values between 1-30 result in faster playback. The actual speed is signaled at center of the button. To change the speed, drag the red point, and set the desired speed while pressing the left mouse button. The changes are applied immediately.

During playback the statuses of the special modes of the camera are displayed *(e.g. decreased frame rate or EPTZ mode).*

9.5   Preset Playback

In case of PTZ cameras preset playback is possible *(using the hidden PTR preset detectors).* During preset playback only the positions belonging to the chosen preset detectors are displayed.

- Select the desired PTZ camera.
- By using the [P] button of camera menu, select one or more preset positions.
- The selected presets will be displayed on the timeline next to camera.
- By disabling the checkbox on the camera timeline, you can navigate through the images of the chosen presets and you can also play them back.
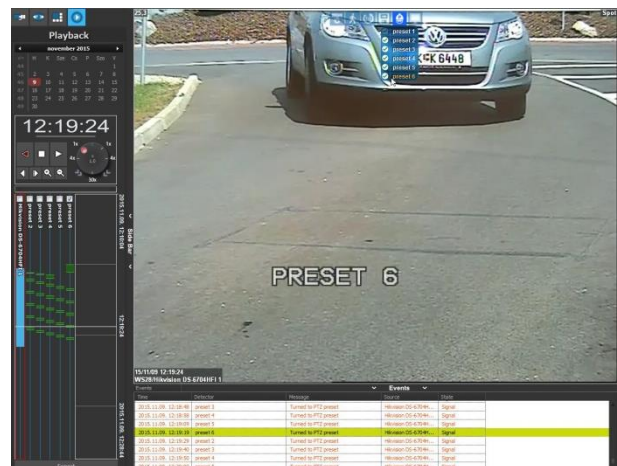
10 Exporting

Video exporting works along the same principle as the image exporting *(see **Exporting or Printing an Image** (page 27))* but can only be executed from the Playback mode. The exported format of the video will be AVI, MP4 or individual frames.

Important: always copy the Intellio Viewer setup file *(which also contains the Intellio Video Codec)* during the export, because these recordings can only be played with the Intellio Video Codec!

10.1 Exporting Video

Maximum 4 cameras images can be exported simultaneously. Exporting function is available on the **Playback** interface. The steps of exporting are the following:

- Select **Playback** and drag cameras into the layout
- Select the record lane of the camera *(hold down the **Ctrl** button to select several lanes.)* If more than 4 cameras are selected, only a **Bookmark** can be created.
- Click **Export / Bookmark** button.
- Move the mouse pointer to the beginning of the video and click with the left mouse button. Move the mouse pointer to the end of the video and click again with the left mouse button.
- Select the type of the export in the appearing window, and the export wizard guides you through the entire process. Select **Video & Audio file** option if you would like to export the selected period as a video file. One camera can be exported by using **Individual frames** option. The **Bookmark** option creates a new bookmark for the given time period, containing the selected cameras and audio inputs.
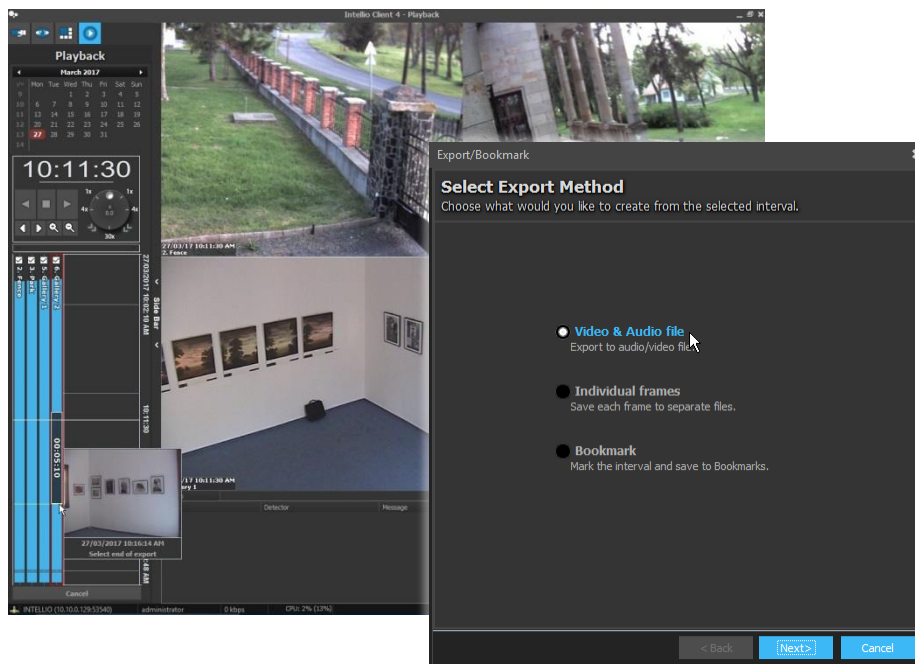
10.1.1 Video and Audio File

By enabling **Enclose Intellio Viewer installer** option, the installer of Intellio Viewer *(including the Intellio Video Codec)* is saved to the selected path.

Select one of the three types of the export, and press the **Next** button.

Intellio Video Codec

This is the recommended way to export video from IVS. The exporting process is fast, and the exported file contains all unmodified frames and metadata, as well as a digital signature. Playback requires an installed Intellio Video codec. The recommended media player for these files is Intellio Viewer; it is capable to zoom in, and to show all the metadata *(motion, detector information, etc.)*.

Standard .MP4

The standard MP4 export can be used for cameras which use H.264/H.265 encoding. The exporting process is fast, and the exported file contains all unmodified frames, but does not contain metadata and digital signature. No external decoder is required for playback.

Recompress

The exporting process is very slow; the exported file contains recompressed video frames, and does not contain metadata and digital signature. Any installed VFW *(Video for Windows)* codec can be selected, select one of them by pressing **Configure Compression...** button, before going to the next step.

Select Export Options

- If necessary, specify the time interval in the window that appears.
- Select the **Output file** *(the location of the video)* and the **Target FPS** *(max frame rate of the video)*.
- To export audio sources, tick the checkbox, and select the audio sources.

  Note: *currently it is not possible to export an audio source without video.*

- Set maximum size of the files.
- Click on the **Export** button.
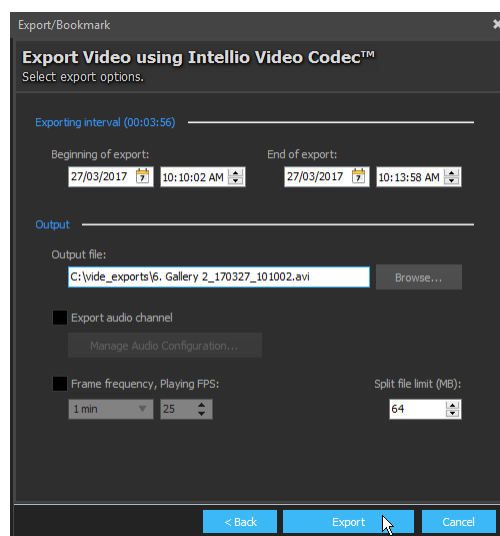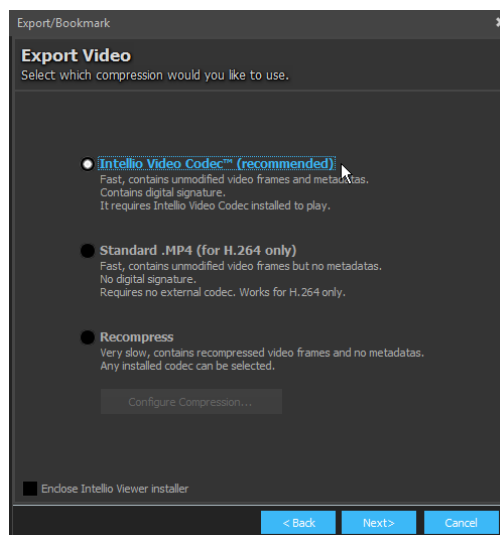
Once the export process has finished, the exported video or frames can be found in the desired location on the hard disk. The recommended player for the AVI files is Intellio Viewer, but any other popular media players can be used that support the external VFW codec *(e.g. Windows Media Player)*. The mp4 files can be played by built-in media player software.

When exporting more than one video simultaneously an ***.rcv** format file is also created at the target location. This file allows the **Intellio Viewer** to simultaneously play the recorded footage. The Intellio Viewer is installed automatically when you install the IVS client.

Note*: the Intellio Viewer does not support to play mp4 files.*

10.1.2 Export to Individual Frames

At any given time, only one camera footage can be exported as a series of individual frames.

- If necessary, specify the time interval in the window that appears.
- Select the output directory by clicking the **Browse…** button.
- The **Frame frequency** option controls the time interval between two images.
- The **Scaledown** option controls the size of every exported image.
- The **Counter start** option modifies how the exported files are named.
- The timestamp is the time of the camera's inner processor.
- Enable the **Draw metadata** option, if you want to see all detector information on every exported image.
- Set the desired image format.
- Click the **Export to Frames** button.
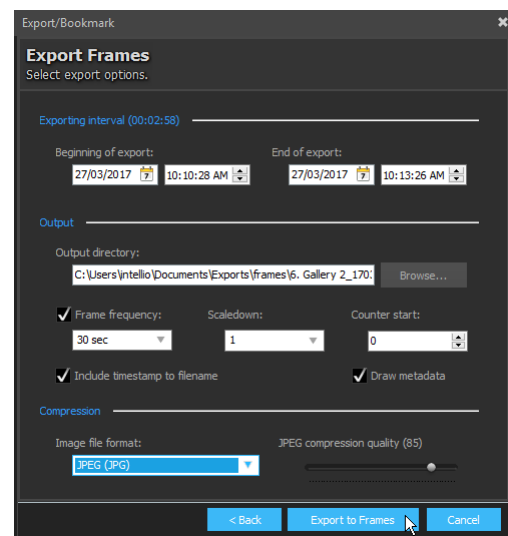
10.1.3 Bookmark (only IVS4-Corporate / Enterprise)

- If necessary, specify the time interval in the window that appears.
- Type the name of the bookmark.
- Type the description of the bookmark; this is done in order to make future Bookmark identification easier.
- Click on the **Bookmark** button.

10.2 How to Play Video Saved with Intellio Codec?

10.2.1 What is in the Footage?

The videos saved using the **Intellio Codec** have the following contents:

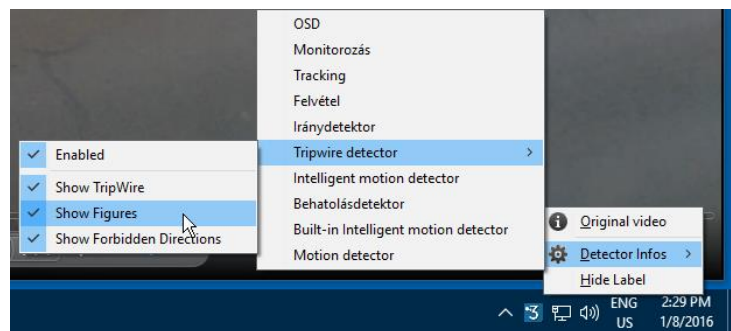- The video stream in a high compression/good quality format.

- Tracker information generated by the Intellio cameras.

- Recording, frame rate and other video related information stored by the Intellio servers.

The files are in a standard Microsoft Windows compatible **.avi** video format.

10.2.2 Necessary Steps for Playback

Video Playback using Intellio Video Codec

1. It is recommended to use the Intellio Viewer for playback as it contains the **Intellio Video Codec** package. It is also recommended to always attach the Intellio Viewer to every exported file. The exported video can be played by any other video player application that supports VFW codecs *(e.g. Microsoft Windows Media Player)*.
2. Start the **Intellio Viewer**
3. Click on the button and select the file you want to play. *(More cameras can be played simultaneously by using the **.rcv** file. The Intellio Codec is automatically loaded together with the selected footage.)*
4. To view the embedded motion information – e.g. Intellio tracker info – right click on the desired camera picture.
5. Select and enable for example the **Tripwire detector** menu item from the popup menu. If the green zones appearing on the footage hinder you in viewing the video, you can disable the feature from the detector submenu.
6. From this point forward the video will be played with the embedded motion information.
   The Intellio Viewer is capable of zooming in on the footage being played. Use the mouse wheel to zoom. You can also move the magnified area by simply holding the left mouse button and dragging the image.

Note: *When using a third party application for playback, a small IVS4 icon will appear on the Windows system tray which is found in the lower right corner of your desktop. This icon can be used to control the embedded motion information.*

11 Bookmarks

By using Bookmarks the recordings can be tagged, so they can easily be found, played back or exported in the future.

Using Bookmarks requires the user to have **Export** rights. With these rights the bookmarks can be viewed on any of the clients that are connected to the SITE.
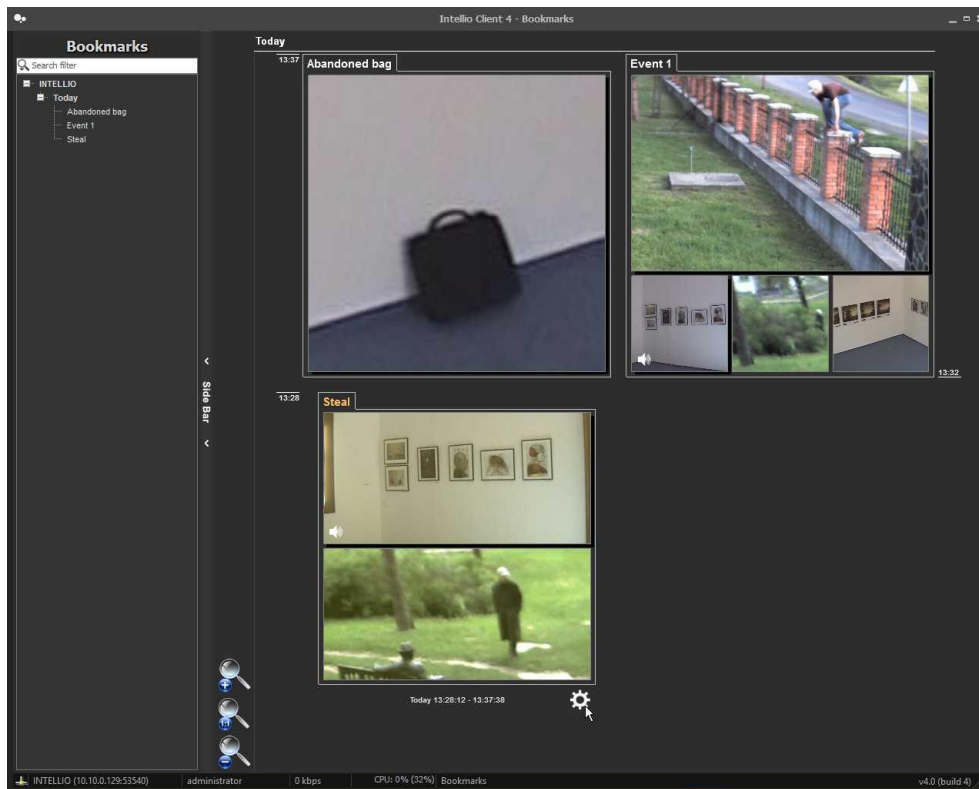
Bookmark mode can be accessed from the second group of icons in the main menu or by pressing **F2** the right number of times.

The list of existing bookmarks can be found on the left side of the screen grouped chronologically. The main list is in the center of the screen *(from top to bottom in descending chronological order).* The bookmarks in the main list are displayed with *snapshots (max. 4 pcs / bookmark).* If the camera contains a detector, the snapshot is selected intelligently, by using the detector events from the bookmarks time interval.

The main and grouped lists are synchronized, meaning that if a selection is modified in one list then the other list will be modified as well. You can scroll through the main list by pressing and holding the left mouse button, or with the help of the scroll wheel.

11.1 Creating Bookmarks

Creating a bookmark is similar to exporting video footage *(see **Exporting Video** (page 32)),* the only difference is that a bookmark can contain any number of cameras or audio sources.

11.2 Managing Bookmarks

In the main list hover over the bookmark you want to manage. By clicking the ⚙ icon the *Manage Bookmarks* window appears.

11.3 Bookmark Playback

To play a footage referenced by a bookmark, simply double click with the left mouse button on the desired bookmark in the main list.

11.4 Editing Bookmarks

It is only possible to change the name and description of a bookmark. It is not possible to add or remove cameras to/from an existing bookmark.

1   Open the *Manage Bookmarks* window.
2   Change the desired data.
3   Click the *Apply…* button.

11.5 Deleting Bookmarks

Deleting a bookmark will not delete the footage. If the footage shown in the bookmark is still available, then that footage can be viewed after the bookmark has been deleted.

4   Open the *Manage Bookmarks* window.
5   Click the *Delete* button.
6   Confirm your selection.

11.6 Exporting Content of a Bookmarks

7   Open the *Manage Bookmarks* window.
8   Click the *Export…* button.

It is only possible to export 4 cameras simultaneously when exporting the footage shown by a bookmark. This is the only limitation. If the bookmark contains more than 4 cameras, then the 4 cameras which you wish to export have to be selected from the popup window that automatically appears after clicking the *Export…* button. If the bookmark contains 4 or less than 4 cameras, all of them will be selected by default. Select the cameras and use the export feature as you would normally. The start and end dates are set by the bookmark, but of course these dates can be overridden in the window that appears.

12 Slideshow

Slideshow is extremely useful to find events where the changes on the camera's field of view is permanent and easily detectable.

The **Slideshow** mode can be accessed from the second group of icons in the main menu or pressing **F2** the right number of times.

Drag in one or more cameras into the monitor, or drop the unnecessary ones from there by clicking the camera tab, and dragging if off. Maximum 4 cameras can be dragged in the monitor area so please be advised what cameras are considered in the slideshow.
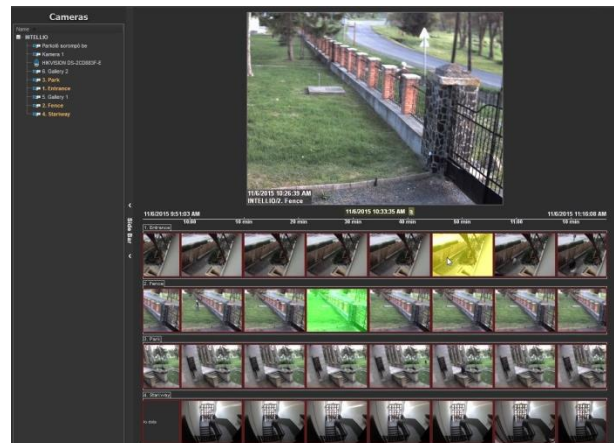
Move to mouse pointer above the horizontally displayed images, keep holding the **left mouse button** and move the mouse left or right to move between the images.With rolling the mouse scroll button the time interval can be scaled up and down, which helps to find an event.

Click on an image to fix it on the display. It will be marked green. Click on it again to disable fixing. The image can be magnified, and with the help of the mouse scroll be used magnification.

Click double on an image to jump pack to playback mode, set at the time of the image.

13   Smart Playback

13.1 Intelligent Event Browser

Intelligent Event Browser provides an efficient interface to gain a quick overview of the frames of stored detector events. The controls of the interface are comprised of a camera detector list, a calendar and a slider of the event frames.

The required detector can be selected from the camera detector list. The list contains detectors for each camera. To select one or more detectors check the checkbox next to the detector name. Then the frames of the detector events will appear in chronological order, starting with the date selected in the calendar.

You can jump backwards or forwards in time within the frames using the mouse wheel, or by selecting a date in the calendar. By hovering the mouse cursor over a frame, a new window will open and the footage showing the event will be played back automatically.
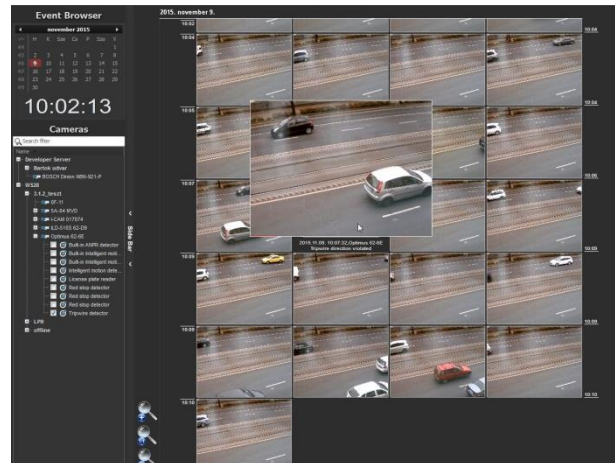
This interface gives a quick overview of the various alerts pertaining to a selected detector *(motion, entry to area, intrusion, etc.)* and simple events *(vehicle license plates, human faces, etc.).* It is especially efficient in case of the onboard Intelligent motion detector.

Hidden detectors are not visible by default, but can be made visible using the **Display hidden detectors** menu that pops up after right-clicking the mouse.

13.2 Intelligent Motion Search

The Intelligent Motion Search function allows users to create virtual detectors to enable the simple searching of events in the recorded video which had not triggered an alert at the time of the event in the lack of the necessary detector.

Virtual detectors can be created for the cameras on the interface either by right-clicking on the camera and selecting **Add** in the menu, or by pressing the **Add detector** button in the top left corner.
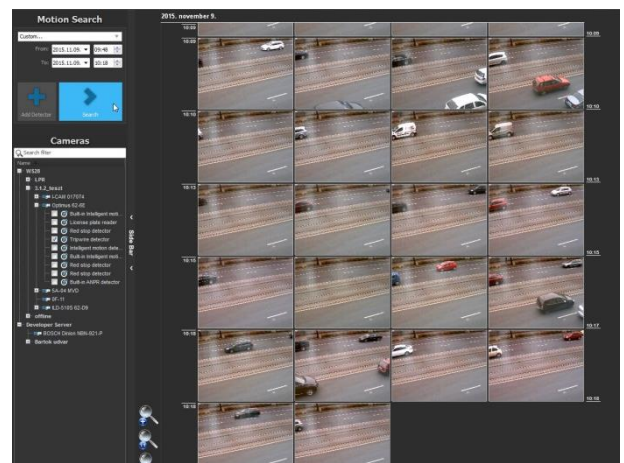
The virtual detectors created can be used for searching events by selecting the time interval in the bottom left corner and clicking the **Search** button.

Each event searched is represented by a frame, which – when clicked – opens up the playback interface with the corresponding time and camera. When navigating back to the previous page the search results will not disappear, so the search can be continued easily.

A virtual detector can be deleted or modified with a right click on the mouse; one option in the roll-down menu opens up the settings window of the detector, while the other one deletes the detector.

13.3 Intelligent Object Search

This search option works on the recorded video from any type of camera and is based on monitoring the change of pixels. This method can be used if the searched for object was stationary for an extended period of time. It is, therefore, an ideal tool for observing parked cars.

Intelligent object search is easy to use. Just drag the necessary camera onto the panel, then select a frame from the frame slider where the object in question can be seen. The temporal spacing of the frames in the frame slider can be modified with the mouse scroll wheel. Moving across the frames can be done by holding the left mouse button pressed over the frame slider, and moving the mouse.

After having selected the image frame, drag the highlighted area in the center over to the object to be searched for. In case the default selection is inadequate, use the **Remove selection** on the edge of the panel, then make a custom selection *(clicking the left mouse button will create a new corner, while a right click will close the selection).* The tracking parameters are represented by a icon.
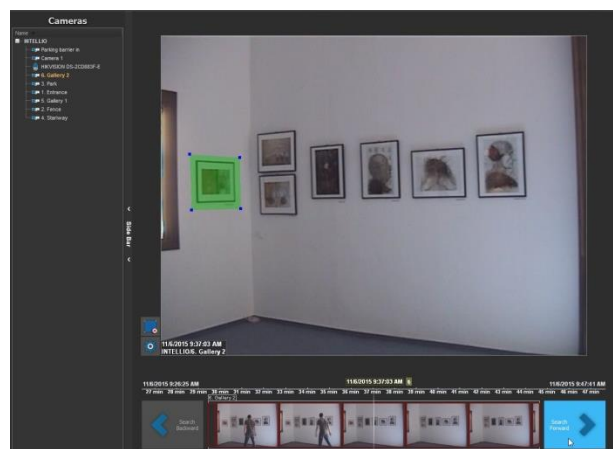
Search parameters:

- the lost time required for a search to be successful *(allowing the search to go uninterrupted even if the searched for object is temporarily covered by another one),*

- search type *(quick search is performed quicker, but does not necessarily yield the first result, while the advanced search is performed slower, but filters through consecutive images)* ,

- environmental sensitivity *(changes in light conditions and other parameters in the area under surveillance).*

Press the **Search Backward** or **Search Forward** buttons to scan the images before or after a particular moment in time in search of any changes. In case the search is successful, the image displayed will depict the moment of the change occurring.

14 Event Query

The **Event Query** included all kinds of event monitoring, tracking, face and plate recognizing option currently available. Some event detections require specific cameras, not every device capable to use every kind of detection. By pressing down the **F4** function key you automatically open this mode.

Set the starting and finishing time of the query or select one of the predefined periods from the roll-down menu, then select the **Site** and open one of the tabs required for making a query (*Events*, *Face Browser*, *License plate*)

14.1 Events

The **Events** tab is a universal query page: it can list all the events of a selected type and represent them on a graph. In fact, dedicated tabs often yield more details for individual queries. For this reason, since the Events tab is universal, use it only if you have made sure it gives better results or there is no other way to query the events..
To start the query follow these steps:

- Check the checkboxes of the selected cameras and events. For large quantities of detectors, the filters at the top of the list can be used to make selection easier. Use the filter input field and/or the drop-down list to filter the list items by name and/or detector types.
- Select the necessary filters *(Enabling the* **Filter on server-side** *can decrease the bandwidth demand of the search, but a new query must be done to display non-queried information).*
- Click **Query** button.

After the query, there are two kind of display types of these events, accessible by selecting the tab on the lower left side of the client. These tabs are:

- **Diagram**: Shows the occurrence of the events on a timescale. It can be scaled by selecting a different time interval from the drop down list.
- **Image Browser**: Each event here are represented by a small image. There are three options available here, **Zoom In**, **Zoom to original** and **Zoom Out**. The **Zoom to original** means the full size of the image (often the thumbnails are zoomed in to the cause of the event).

Double clicking on an event will result in the appearing of the **Playback Mode**, showing the monitor of the camera on which the registered event can be seen and the time set on the time
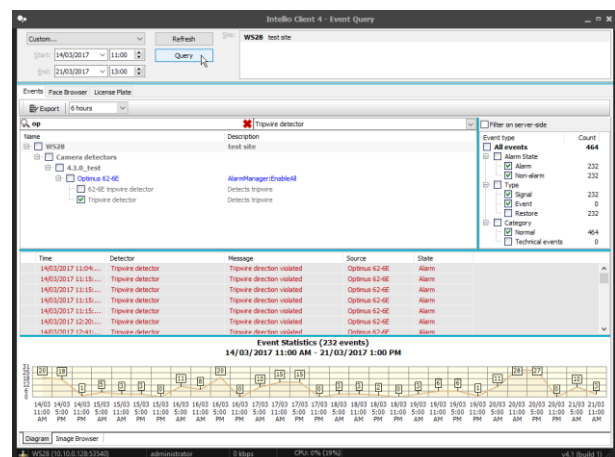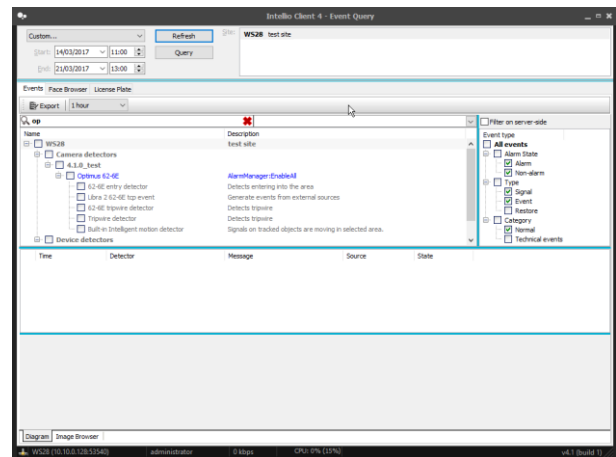
of the event. The detector belonging to a given event and the corresponding metadata are displayed at the same time.

14.1.1 Virtual Detectors

The virtual detectors are used if you want to run a query to find a certain event, but there is no available detector. In this case a virtual detector can be created, which can be used to query events what happened before the detector creation. Since this is a time-consuming procedure, this can take even minutes.

The virtual detectors can be created on the **Intelligent Motion Search** interface or in the **System Configuration / Alarm / Virtual detectors** menu. The creatable detectors on the ILD cameras are the tracker based detectors and the motion detector, on the ONVIF cameras only the motion detector, if the camera uses server-side motion detector *(it cannot be created on cameras with onboard motion detectors)*. To find help in creating a detector, read the *Detectors* chapter of the *IVS4 Installation Guide*.

The virtual detectors can be queried on the **Intelligent Motion Search** or on the **Event Query** interfaces. The available detectors on the **Events** tab are displayed in italic fonts for the sake of easier identification.

14.2 Face Browser

The **Face Browser** is basically an event listing: it creates snapshots about events where faces were found. To start a query, follow these steps:

- Select the detectors by checking the checkboxes.

- Set the Gender distinction with the help of a drop down list (**Male and Female**, **Male**, **Female**).

- Set the age groups to be listed.

- Use the event filter drop down list (**Show events without age data**, **Hide events without age data**).

- Click button **Query**.
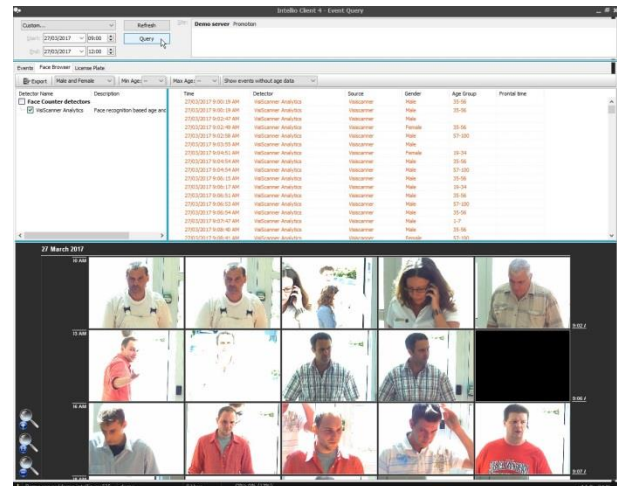
By double clicking on an event or on the related thumbnail, the client will start the **Playback Mode**, showing the previously selected event.

The list can be exported to a file. To do this, click on the **Export** button, select the location and the format of the file then click **Save**.

14.3 License Plate

This query is used on the ANPR module-stored events. The filters of this tab allow for tracking back specific license plates and license plate groups easily.

License plate filter, **Country** and **Sub-Country** search for the co-occurrence of set characters in the relevant columns of the database, regardless of where the characters are located, thus they can also be used for searching for license plate fragments.

The results can be exported to an Excel database.
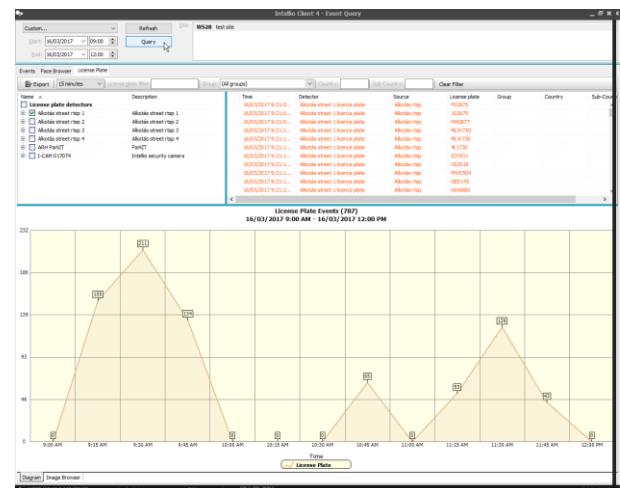
15 Map

The Map enables viewing cameras based on their physical location and provides visual information for identifying and accessing the monitored area.

To use this function, the cameras have to be placed and configured on the **Map** in the **System Configuration**, but after that, the user simply have place it on a panel in **Live** view. The list of the available cameras and locations can be find in the **Side Bar** under the 🌐 symbol. Any one of the listed locations can be dragged into any panel in any layout. After placing a location on a panel, it can't be altered or moved, and can't be dragged off from the panel. The Map can be removed with the Close map button in the toolbar in the lower left corner of the panel.
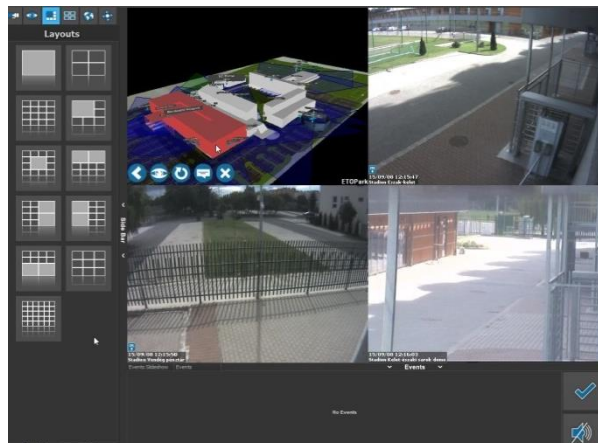
For navigating on the Map, use the mouse. Moving in the directions is done by the left mouse button, rotating by the right mouse button. By using the mouse wheel, it can be zoomed in, or out.

15.1 Buttons for Maps

Back	This function takes back one level, "zooms out". The help of this function there is possible to switch levels of a building, or take a look at the outer area of a building. It is also possible to switch locations.
Change View	Switches between the axonometric and the over the top view type.
Switch Images	Changes the background picture to one of the other. If there is only one picture added to a location or a level, this function will have no effect.
Show/Hide Captions	With this button the names of the cameras and buildings can be displayed, or hide.
Close	With this button the map can be closed, removed from the panel.

15.2 Map Functions

Depending on the configuration setup, the Map has the following functions:

- **Jump/Fly**: The Map has the ability to move between cameras in case there are incoming alarm signal. With the help of this function the map will show the latest alarm event and its location. With the flying animation on, the Map will not just switch between cameras, it's moving between them.
- **Camera Preview**: Above the cameras in a small area shows the live image of that device.
- **Projection**: The cameras project the live image on the map. This image can be transparent to a various degree.
- **Motion projection**: If the camera has the tracker turn on, and the function enabled, the Map displays the moving objects on the projected area, using symbolic figures to distinguish the type of objects.

The cameras of the map always display the status of the camera *(online, offline, alarm)*. If the camera is in alarm state, it also displays the cause of the event. If in the settings it is enabled, in a case of the alarm event the map will automatically jump to the camera from where the alarm event came.

The map can also display the alert status of the system detectors.

Important: Alerts on the map will not automatically revert to normal status until these alerts have been checked!

16 Panorama

Every panoramic view is attached to a map location; therefore panoramic views can be created on the map. To view panoramic images, first place the selected panoramic images on a panel in the **Live** mode. This can be done in two ways:

1. Panoramic images are listed in **Live** mode under **Side Bar / Map**. Select the required image, and drag it to a panel.

2. If a panel already contains a map, click the panoramic image object on the map to navigate to the corresponding location. Then the map in the panel will switch to panoramic view.

To quit panoramic view click the **Close panorama** button in the toolbar in the lower left corner of the panel. Click the other button to navigate back to the map, to the location of the panoramic image.

16.1 Using Panorama

In panoramic view navigate within a panel using the mouse. Press the left mouse button to move the panoramic image horizontally or vertically, thus panning the entire field of view. Use the mouse wheel to enlarge or shrink the image. If actual layout contains a Spot panel, by double clicking on a certain point of panoramic view, the related camera image can be put into Spot panel.

For each of the cameras that are contained by panoramic view is possible to assign a certain preset position of a PTZ camera. By **Shift** + **Left mouse** clicking, this kind of preset positions can be activated and the related PTZ camera image can be put into Spot panel.