



e-netcamCLIENT User Manual

Short version



GENERALITIES

e-netcamCLIENT is a powerful software tool that allows communication with IP cameras and video servers, and displays the images obtained on operation screens.

Its main features are summarized in three points:

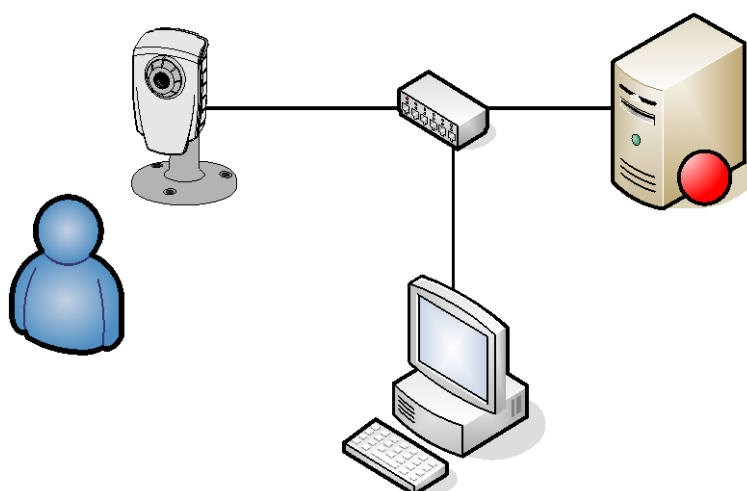
- Watch and record
- Alert
- Act

Watch and record, because the program makes it possible to obtain images from the IP cameras, wherever they may be located, and whenever there is communication between the IP device (camera or video server) and the PC that has the program installed.

The program is equipped with a number of tools that allow for all types of recordings: on-demand, scheduled, with motion-control, etc. Of course, the program itself facilitates viewing the recorded images through intuitive and simple interfaces, with comprehensive searches of specific sequences within a particular recording.

Alert, because the system, either alone or combined with the IMDC (IProNet MultiDevice Controller) is formed as a powerful warning system, whether it be based on external devices connected to the cameras such as sensors, photocells, etc. or based on a change of image or motion detection.

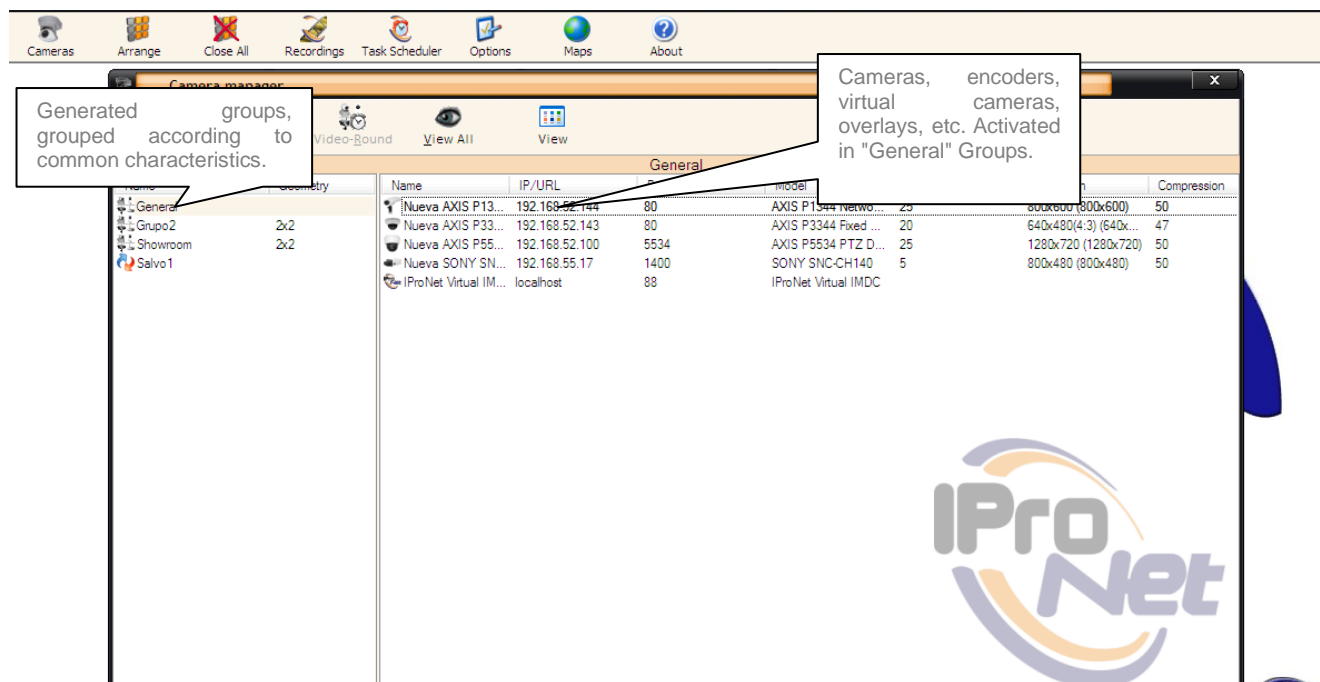
Act, because by means of the program they can interact with IP devices, and therefore it will be possible to switch the lights on or off, raise and lower barriers, etc.



INSTALLATION AND SETUP OF CAMERAS AND GROUPS

Once the application is booted...

...the first screen displayed is similar to the one below: (with activated cameras...)



This toolbar will facilitate access to:

Camera Manager: Allows for the maintenance of the cameras, of its characteristics and the camera groups that will make up the video-patrols in the future.

Arrange: It optimizes the presentation of the camera displays that are viewed by organizing the space and geometries.

Close all: Simultaneously closes all the screens that were active at that moment.

Recordings, Allows access to the settings and management interface of the recordings made, the viewer, sequence locator, etc.

Task Scheduler: Creates events, actions that could be programmed into the system; this button gives access to the interface in which tasks may be scheduled.

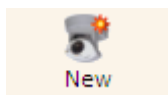
Options: Provides access to the general setup features discussed above.

Log: Allows access to a user access event log.

Maps: Provides access to the Map settings such as the camera location system, groups and detectable map-based "Salvos", which will be discussed later on.

About: Information regarding the version of the application.

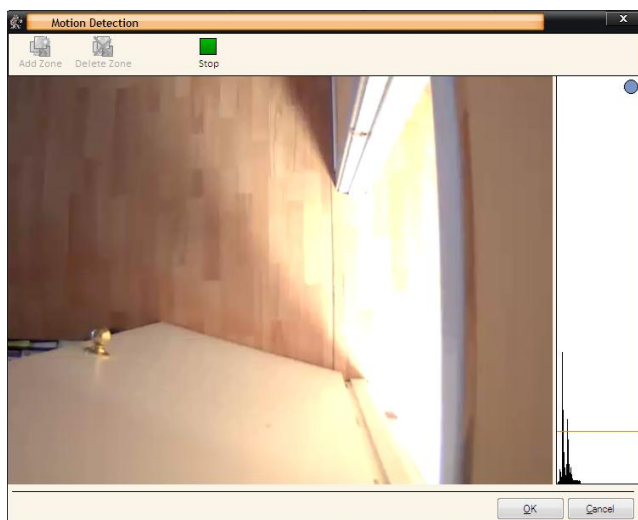
Cameras



This button displays a drop down menu from where cameras, groups of cameras and the "Salvos" can be activated. Clicking the button and "New Camera" is selected with the purpose of beginning the camera activation process.

To use a camera or IP video server, it is necessary that you have your IP address or URL on hand.

Motion Detection Setup



Pressing the "Motion detect." button (general properties) will allow you to access the motion detection settings; where after a window like the one below will appear:

As you can see, to the right of the image, there is a rectangle with an orange line, this line can be manoeuvred. Doing this calibrates the threshold or the degree of sensitivity that you desire the camera to have to begin to record when there is motion that exceeds this threshold.

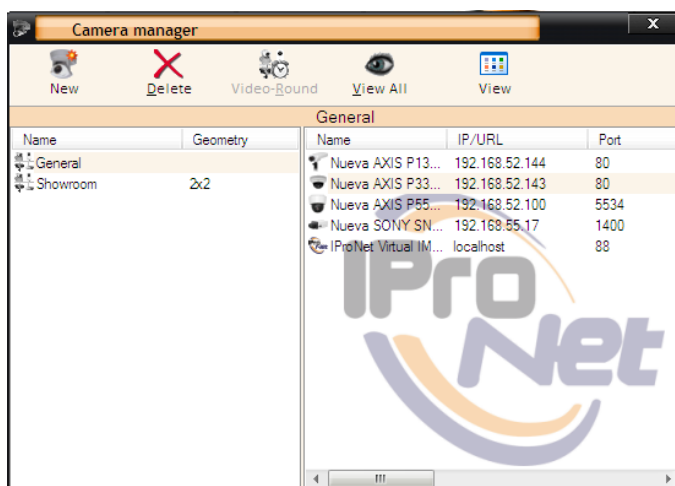
If there is any movement that exceeds the threshold the line will turn red; this would mean that the system has detected movement or a change in image and, therefore, the images would be recorded or an alert will generated if there is a previously scheduled event activated and enabled with this option.

It is important to note that the image processing is performed on the entire display, although it is possible to scan only parts thereof which may correspond to doors, windows, corridors, etc.

This will require "Add Zone" by using the button at the bottom of the window which will present an area which may be increased or decreased at will, as well as move about the window.

Any amount of analysis areas may be added as desired.

Connection



In this screen, the values used when the system performs a connection, on-demand, with the camera shall be specified, which occurs when double clicking on the representative icon with the mouse either in the camera list, as well as in the maps where they may appear.

The parameters indicated on this screen will NOT affect the recording that can be done programmatically -by calendar- or by alarm, but will affect the on-demand recording.

In short, it might be called the set of values that are used in the camera connection to display the images thereof, and allocated to the camera within the General group where the cameras are activated automatically when they are incorporated to the system.

Connection type: The "standard" connection will be selected for viewing on-demand. If the camera can deliver MPEG4 or H.264 streaming it can be Unicast (Internet) and Multicast (LANs).

Resolution: It will grant the ability to select from among the viewing formats, quality and resolution (number of pixels that make up the image) that are available in the camera that we are connected to.

Frame-rate - Connection ratio: At this point, the frame rate we want to receive from the camera with respect to the viewing thereof and the on-demand recording will be decided. It is expressed in frames per second.

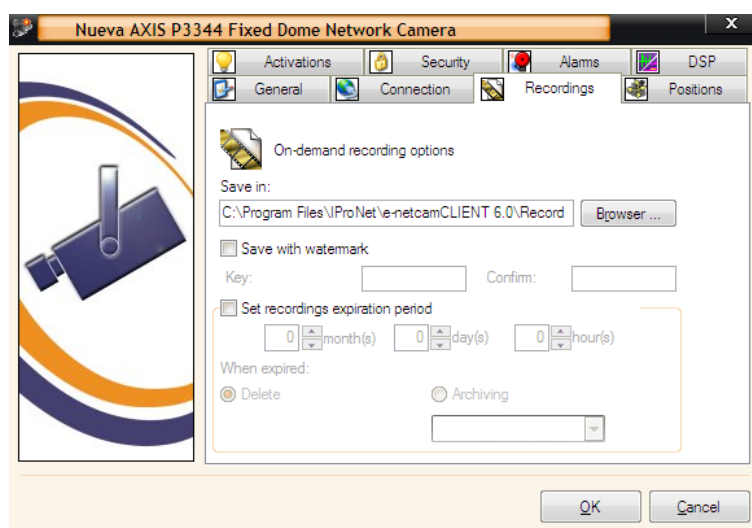
***IMPORTANT:** The factor indicated on this screen IS ONLY USEFUL for the task that is defined at this time, indicating different factors for each task, even when the camera included in the task is the same one.*

Compression: The desired compression percentage will be indicated that the camera server produces for each image captured for its display. An optimum level is hovers around 65%, taking into account that the higher the percentage, smaller sized images are generated and therefore easier to transmit and having a lower occupancy in storage processes.

The great advantage of this system is that the camera itself performs the compression and therefore releases the central processor from that task.

***IMPORTANT:** The higher compression percentage the lower the quality image, but with a smaller file size (making it easier to transport through the communications system).*

Recordings (on-demand)



In this place the parameters for the on-demand recordings will be defined, that is, those applied in real time from the display screen.

Save in: This box allows the user to select where the output files of the on-demand recordings made with this camera will be stored.

Save with watermark: When you the box checked, this lets the system know that the camera will incorporate watermark the on-demand recordings that are made with the camera.

When the "Set recordings expiration period" box is checked the validity time of the on-demand recordings made with this camera can be selected.

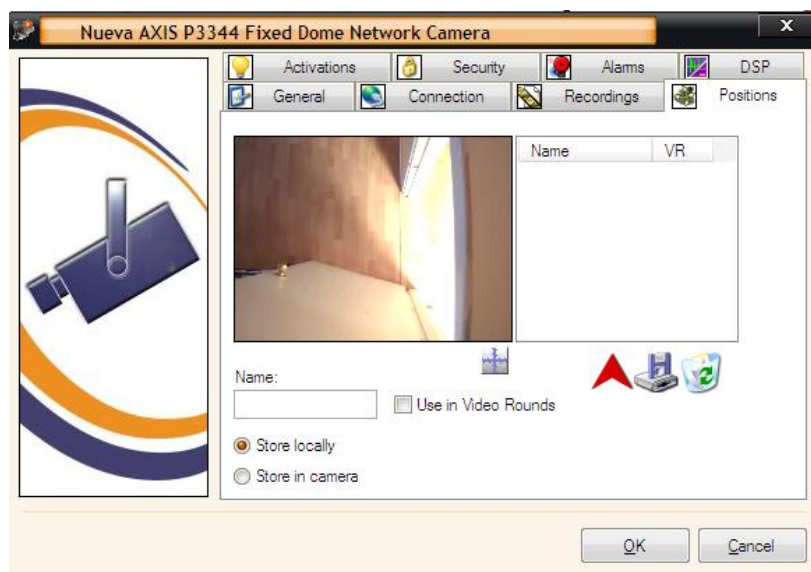
If an expiration date is selected, the system needs to know the actions to be taken when the recording expires which may be the deletion of the file "delete" or moving it to one of the previously generated files by means of the "Archiving" command.

It is possible to setup the archiving locations from the screen by clicking the icon:



Positions ("presets")

[This tab appears only if the camera activation system detects that it has PTZ features.]



To create presets, simply position the camera in the desired position, assign a distinctive name, indicate whether that position will be used in video-patrols in which this camera is included, which will require checking the Video Patrol box, and finally assign it to the list of positions by clicking on the red arrow appearing in the window.

Camera groups

The creation of a group of cameras will allow the user to establish an order in the cameras built into the system based on elements that may be useful.

When the cameras are activated in groups, it creates the possibility of so-called "video-patrols"; these will be the on-screen sequence of the different cameras that make up the group in the number and speed that the user deems necessary.

The cameras making up the group will appear on the screen according to the layout chosen for that video-patrol, taking into account that in the case of PTZ cameras, and if, as mentioned above possess a series of created prepositions, each of the defined positions will be treated as a different camera, presenting the positions of the camera before moving on to the next.

There is no limit to the groups to be defined in the system, with the only condition that each one includes at least one camera.

The video-patrols of each group can be viewed simultaneously on-screen, that is, on one screen to see two or more group video-patrols.

Incorporation of cameras in a group

The mechanics of this action is based on the "copy and paste", that is, after selecting the appropriate camera with the mouse, right-click it, and click on "copy". Once the camera that needs to be moved has been selected, the mouse must be positioned over the icon of the group where you want to "Paste" the camera, ending the process and needing to be repeated for each camera or video server that is incorporated into the new group.

Properties of the cameras in the "Video-patrols" Group

The cameras (or encoders) have been activated in the system in the "General" section, and they have the parameters that the system will use for connections "On-demand" (when the user double-clicks the icon corresponding to the camera that is to be used).

However, a camera, "copied and pasted" from the "General" group to any another group may have different connection parameters than what is defined in the "General" section, and therefore, display formats, sizes, qualities, etc., different according to when the camera is accessed by means of the "General" group (video on-demand) or in any other group in which the camera forms a part of.

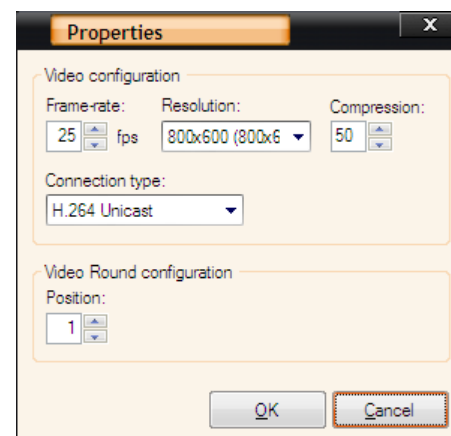
The procedure is as follows:

Clicking on the right mouse button in a group element icon (or selecting multiple elements of the same model) to bring up the Viewing Properties menu of the camera in the group or patrol:

You must select "Properties" since "General Properties" opens up the device options but are not related to the display in the group.

This screen displays the setting possibilities of the selected camera when displayed as part of a video-patrol of the group.

If the top button on the video-patrol screen is clicked on, a keypad is displayed in which we find the following features.



This button is used for the case where the video-patrol has more windows than cameras, that is, that the number of cameras is equal to or less than the number of regions defined. This button is used to "stop" the patrol at a certain point, and re-start the rotation of the camera through the various regions.



This other button is only active when the number of existing cameras in the group exceeds the number of regions defined in the video-patrol. It may be used to stop and re-start the rotation of the cameras in the video-patrol regions.



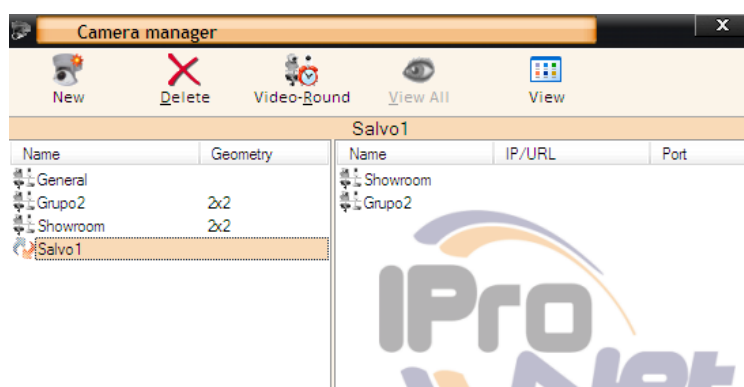
By pressing this button, the patrol will be displayed in full screen. Pressing Esc returns the patrol to its original size.



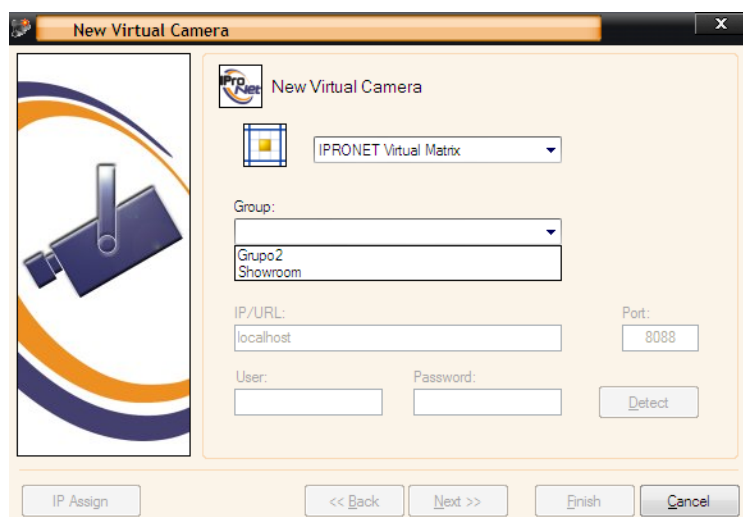
The other button allows you to "set" the window of the video-patrol in order for it to be in the foreground and visible, ahead any other application in the PC. In addition, it should be used to move the image to another screen in a multi-monitor system.

"Salvos"

The Salvos are "groups of groups" of cameras. They are sequences in which the rotations are performed by the different groups existing in the system instead of by cameras.



Virtual camera



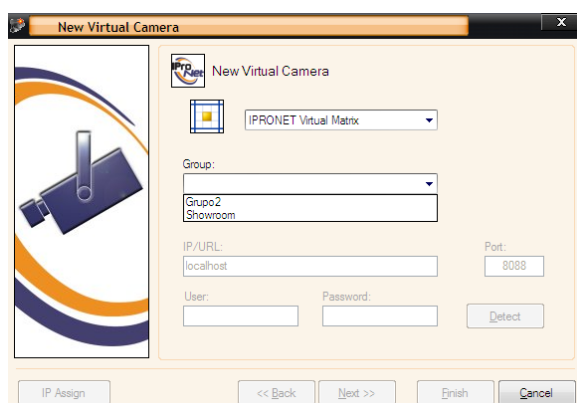
The virtual cameras are different combinations of cameras and information where a video "re-encoder" system allows you to merge into a single video stream images from multiple cameras, including from information sources other than the video.

There are several advantages of this system, among which include:

- Optimization of the bandwidth
- Fewer recording resources
- Inclusion of information, logos, messages in the images

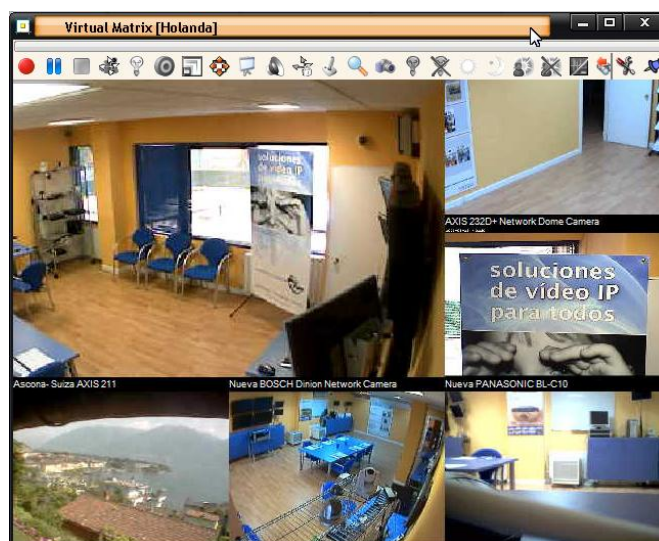
Virtual Matrix

To proceed with a "Virtual Matrix" activation, it is necessary to have created at least one "Group" of cameras because this system is implemented over the existing groups in the program.



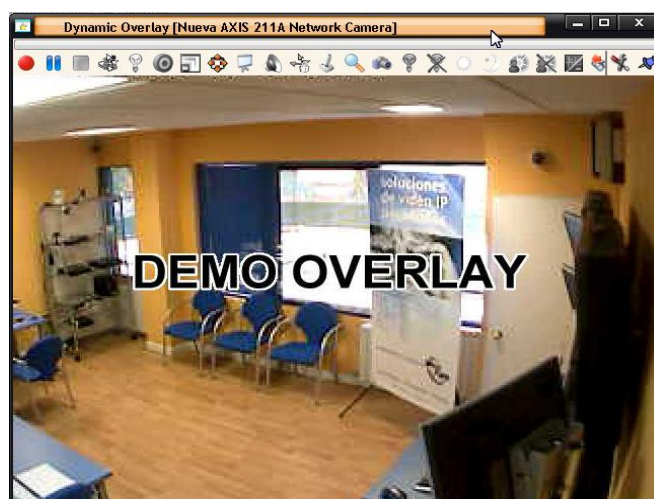
The other parameters are similar to those defined for the cameras, because ultimately, what the system will do is "fuse" the images from the cameras of the group into a single stream, as if there was only one camera.

The great advantage: only one video and communications stream is used. Unlike the "Video-patrol", where a separate connection is created for each camera that makes up the mosaic, the Virtual Matrix uses only one stream.



Dynamic Overlay

The Dynamic Overlay is a system that integrates, into a single stream, the images proceeding from a camera and data generated by a TXT or GIF/BMP file.

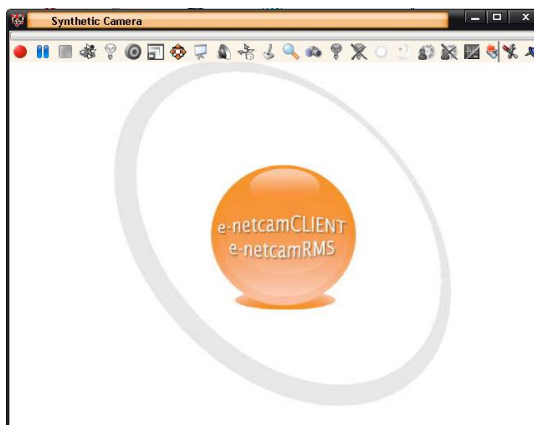


It is the fusion of the images proceeding from a camera and the data proceeding from other sources.

Synthetic Camera

The "synthetic" camera is the result of the transmission of a stream of images generated by a single video source that is not a camera. This is the system defined in the previous section, "Dynamic Overlay", but without the camera video stream.

The result is an "information panel."



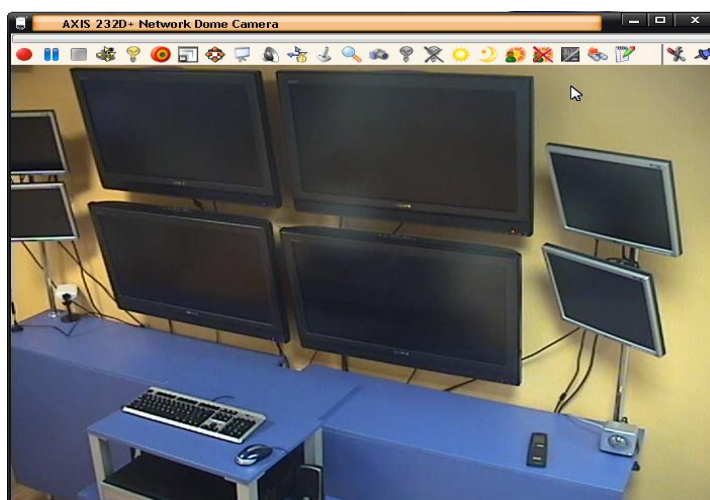
Viewing

Access to the camera after being added in the system is simple and intuitive, because all you need to do is to click on the representative icon within the camera manager. There is no limit to the number of windows that are accessible simultaneously and they can be distributed throughout the PC desktop.

Clicking on the icon corresponding to the desired camera after a few moments after a connection is established with it, the images proceeding from the device are displayed as shown in the figure on the left.

As was established, the description of the camera will appear, as well as the date and time, controlled by the device itself.

If desired, you can click on the bar at the top of the image. In this way, the system will open up a collection of icons that represent the possible actions that can be performed while viewing a camera.





Window Options



Enables the start of a recording on-demand (Rec).



Allows the pausing of a recording (Pause).



Stops a recording (Stop).



Allows the user to access the prepositions defined for those cameras with PTZ features (Pan, Tilt and Zoom).



Allows access to activation and deactivation options of the devices connected to the camera that is being viewed or to Net-IMDC, controlled by the same camera.



This other icon opens up the way for the quick control window of the PTZ movements of the cameras equipped with this feature.



This icon allows the selection among the different connection resolutions or profiles of the camera.



This other icon allows sizing the viewing window to the size set and requested using the above command.



This icon opens the viewing screen to "Full Screen."



This icon will be used for the cases in which the camera connected to the system has its audio module activated, or there is the possibility of making this connection because the camera supports audio.



This icon is used so that the PTZ cameras, when the icon is clicked, does not return to its home position. If the button is "depressed" after about approximately 30 seconds the camera will be positioned in the position known as "stand-by".



This icon allows you to use the joystick on the screen where the button can be activated. If the button is pressed, the joystick will become operational. If the button is pressed in multiple screens, the joystick will operate the camera on the active screen.



Clicking on the "zoom" icon, the camera's accessory window will be opened where the images can be viewed in "zoom" mode wherever the cursor is moved within the active window.

The zoom options can be modified with the right mouse button: zoom and mode.



This icon allows a "snapshot" (JPEG format) by the camera appearing in the window.

The following buttons are active only if the camera model has light control characteristics, due to the fact that they are used for switching the infrared lamp on or off, the activation or deactivation of the black and white filter and the activation or deactivation of the Backlight compensation.





It presents the DSP control options and the image equalizer in viewing time.



It gives way to a feature known as "Roll Back" which allows the viewing of the last 10 seconds of the recording of a camera that is in viewing mode and, in turn, recording mode.



This button allows the user to add text to the recording on-demand; this text may permit the subsequent location of the recording sequence being used as a label.

[It is also possible to access the feature by simultaneously pressing the CTRL + T keys]

TASK SCHEDULING

The system allows you to schedule the implementation and execution of different tasks:

- Scheduled: continuous recording.
- Scheduled: Motion detection controlled recording.
- Motion detection notify, and alarm recording warning
- Event-controlled recording

The scheduling of the tasks are performed in the same way, irrespective of them, and with the purpose of presenting and planning whereby the system will start and stop the scheduled actions based on the start and end date and hour.

The system runs a service that allows the monitoring of scheduled tasks and launches those that are to start, at the time defined, and stops those that have been ended.



This system also performs the appropriate actions to detect motion in the images, without the need for running the entire application, because the service itself is the service that is responsible for the start and stop processes as well as image analysis.

Scheduled: continuous recording.

Five tabs can be observed in the continuous recording scheduling window:

- General
- Weekly
- Yearly
- Cameras
- Water-mark

General

It refers to general parameters which will affect all recordings scheduled for this task.

It will be necessary to define the scheduled task using a distinctive name as well as the expire time, that is, between what dates the event will be active.

If it is to be permanent, the “**Set expire time**” box must be left unchecked.

If the “**Set recordings expire time**” is checked, the time that these recordings will be saved in the computer's hard disk must be indicated before the system automatically proceeds to erase them. If this box is not checked, the recordings will be permanent and the user himself shall be the person who sets the criteria for its deletion.

Finally, the objective of the **Disable scheduling** box is to “freeze” or stop this scheduling indefinitely.

Like the **on-demand** recordings, once this recording expires, it is possible to choose to permanently delete the recording files or transfer the recording to the selected location, using the **Archiving** process.

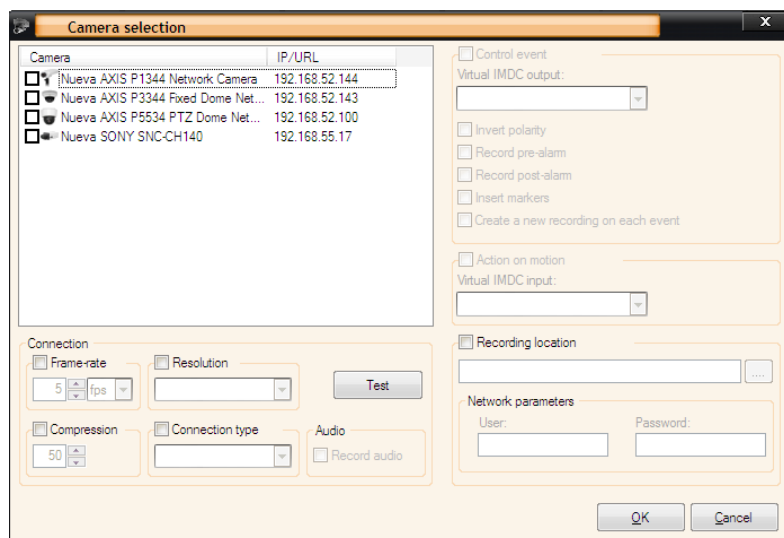
Weekly and Yearly

By means of this process, the system is indicated the recording events that are desired for each day of the week or day of the year. Naturally, you can activate the time intervals that are necessary for each day, being only necessary to indicate the start and the end of the recording and incorporating it into the list using the red arrow on the screen. Similarly, the icon representing a trash bin is used to discard, using the mouse, the previously selected line.

Once the selections have been made, the changes must be saved by clicking on the middle icon, which represents a recording unit.

Cameras

This tab opens the way for the selection of cameras that will perform the operations that are scheduled in the event, as well as the individual settings for each of them when running during the event.



When the camera is selected, the following parameters may be indicated for each:

Establish the connection ratio. It refers to the possibility of establishing a different imaging acquisition ratio than what is already established for the camera display connection.

It is also possible to establish the **image quality** (resolution) for the camera connection in this given event, and able to select from those available in the camera.

to define the **compression** of each frame captured by the camera.

Another important factor is the possibility

***IMPORTANT:** The factor indicated on this screen IS ONLY USEFUL for the task that is defined at this time, indicating different factors for each task, even when the camera included in the task is the same one.*

The **connection type** will indicate, to the system, which connection is to be opened in the recording of that camera, being able to select the desired user from among those offered by the camera system.

For those systems that support **Audio**, it is possible to select the appropriate box and thus enable the recording, as a set, of the audio and video.

Finally, it is possible to enter the **recording location** of that camera in that event. In the case of remote or network storage systems, it may be necessary to indicate, to the system, the connection parameters to those systems.

Scheduled: Motion detection controlled recording

Motion Recording in the scheduled tasks is performed only when the system detects motion or a change of the image, which is performed using a complex algorithm to compare the various images that reach the system, which are processed in real time.

To perform this kind of task, "**what**" "motion" in the camera will need to be defined beforehand (*see Motion Detection*) indicating the area in which you want to detect motion and the desired sensitivity.

The main advantage of this process is that the resulting recordings only display events, which may or may not be useful, but reflect action, thus avoiding long recordings in which one must "search" for what may be of interest among large quantities of information.

Motion detection notify

This process is executed, once the task is scheduled, to detect motion or the change of the image and transmit a warning signal to the observer.

When the system detects this situation, the transmission of a "pop-up" is made to the host computer in which the service is installed (this is installed simultaneously with the e-netcamCLIENT application) so that the Images proceeding from the active camera are presented in the popup window accompanied by a warning signal to warn the operator of this event, provided that the **"Alarm Display"** program is running or alarm receiving programs remain on, such as e-netcamVIEWER or CorporateVIEWER.

Images are recorded simultaneously every 10 seconds, which will be stored in the recordings database, identified with the corresponding icon.

Subsequently, this program option can be used to view, print, export, etc. these images, among which will include the PRE- ALARM and POST-ALARM.

Event-controlled recording

This type of assignment allows the recording based on external events, for example, pressing a button, opening a door or during the time a light is on in a room.

The parameters are similar to the preceding paragraphs, and it deals with launching a task that will execute an "ON / OFF" in recordings based on the event that is in control, while the task is ongoing.

In short, the "physical" entry of the following shall be used:

1. A camera (any compatible camera)
2. Net-IMDC
3. "Virtual" entry from other applications or systems, adhering to the "SDK" instructions

For use with the Virtual IMDC service:

1. Start / stop recordings, associating the virtual IMDC "exit" with the Start / Stop execution

This is achieved by properly configuring the Virtual IMDC.

VIEW RECORDINGS

There are three possible display options when selecting a recording:

- Player
- Navigator
- SmartSearch

Player

The Player format is the best system that can be used to replay the recordings made by the application, whether based on alarms, scheduled tasks, event, etc.



The system will print the active frame



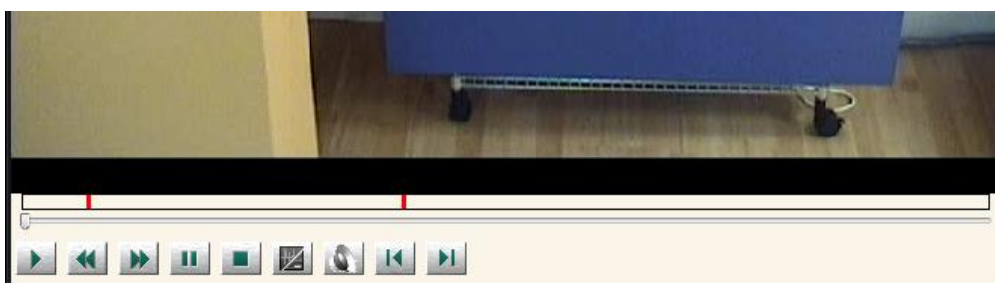
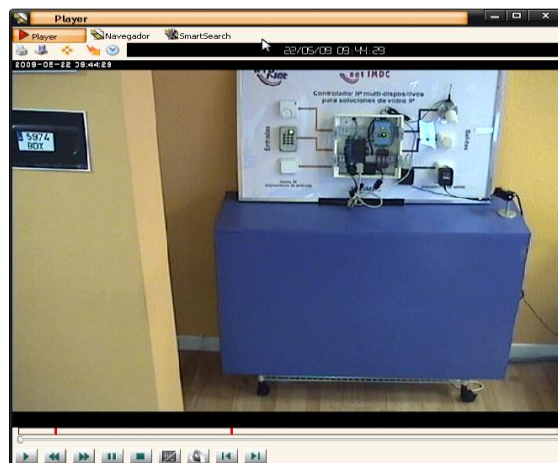
The system will save the current frame as a JPEG.



This button will resize the reproduction images to the actual captured size.



These buttons will allow the simultaneous reproduction of recorded scenes from different points. recordings marked as "slaves" are automatically synchronized with the reproduction of the recording marked as "master."



The other buttons show the usual controls of a playback system: play, rewind, fast forward, pause and stop recording. It can be fast-forward or rewind, minute by minute (Page Up, Page Down), second by second (cursor back and forth) and even frame by frame (by clicking on the image).

The following buttons open the EQ and audio playback controls, and jumping between different text entries (bookmarks) that could possess the recording.

Navigator

The area to the right of the screen shows a mosaic related to the selected recording, so that the first and the last image effectively corresponds with the first and last image of the recording.

If the user positions the mouse over any image by clicking on it once, the system will move to that image, displaying it in the "player" to the left of the screen.

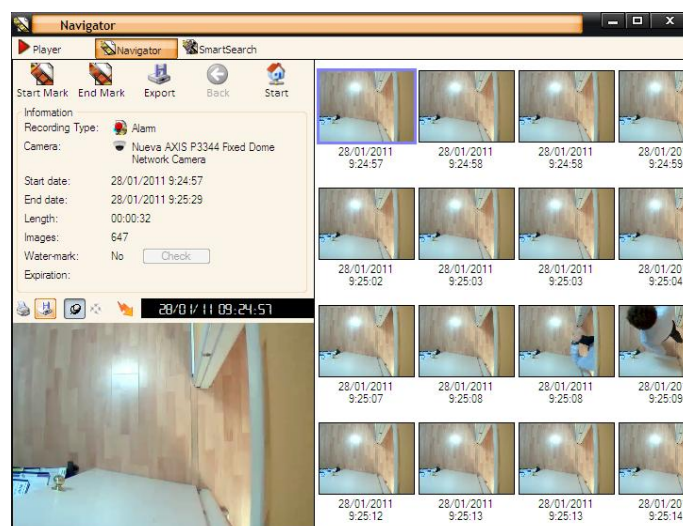
At the top of the screen, in the box to the left, the details of the recording is displayed, such as the type and camera, the date and start time, the end time, the duration, the number of images, if it possess a watermark or not and the date on which the system automatically deletes it (expiration date).

Further down, above the player, you can see the details of the frame in question, specifically, the frame displayed in the player itself. Alongside it, there are the icons that make way for to the impression of the image and its export to a JPG file.

Clicking **once** on any square of the mosaic, the system will position the cursor of the recording on the selected frame, moving the recording forward or backward.

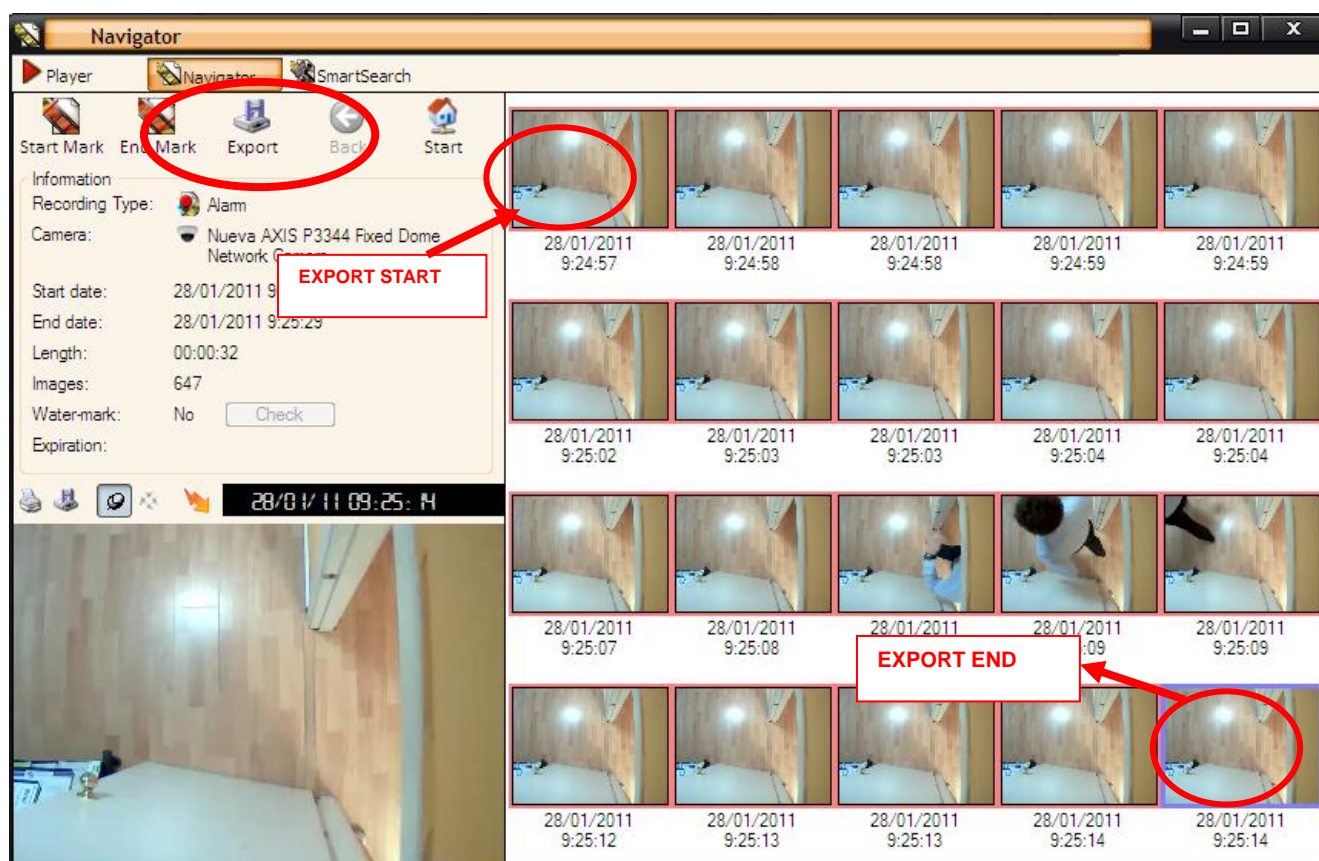
Double-clicking on any square of the mosaic, the system will “dig in” the recording, showing another mosaic of images.

This navigation method between recordings enables the positioning in certain sequences and disregarding the rest without having to watch the entire recording.



Exporting recordings (Navigator)

The user can export the recording or fragments of the recording to any format that the corresponding codec has installed. The procedure for exporting is as simple as selecting the start frame (Start Mark icon), the final frame (End Mark icon) and press **Export** to initiate the process, requesting the name, host and coding of the file that is to be generated.



SmartSearch

It is a powerful sequence location system based on the search for motion or the change of images in existing recordings which would allow the user to detect an event in a recording in a short period of time, despite the duration of the recording.

Using the "Add Zone" and "Delete Zone" buttons allows the user to determine the area of the screen where the analysis is to be performed. These areas may be changed in size, using the mouse cursor.



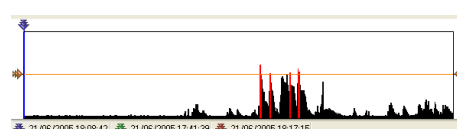
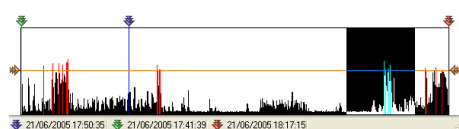
After selecting the area where the motion is to be assessed, the "Detect" button must be clicked on (it analyzes all the images of the recording) or "Fast Detection" (it analyzes one of every two recorded images)

After the detection process has ended, the system will display a screen where we can observe the graphic representation of the observed changes in the selected area and highlighting, in red, the part of the recording in which the defined threshold has been exceeded.

The line that defines the threshold of detection may be modified at any time, even if the detection has already taken place.



Finally, indicating that it is possible to "zoom-in" on the area to be analyzed, using the mouse cursor and holding it down while moving to the desired area. After selecting the area, the button can be clicked on and the system will automatically zoom-in on the selected area.

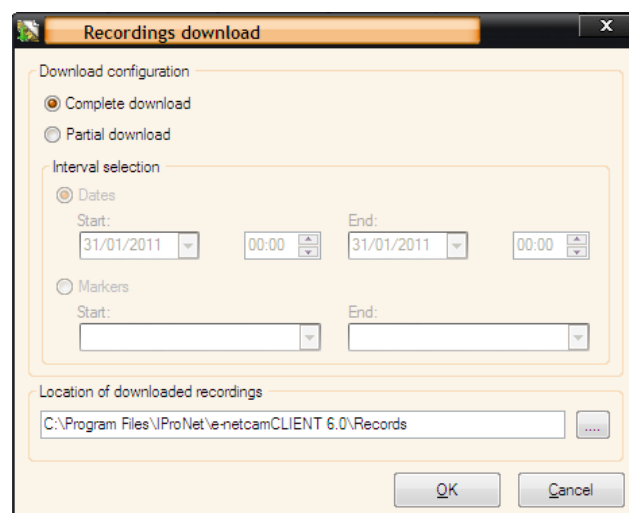


Recordings download

This option allows the download of recordings proceeding from remote systems (other recorders) or from the recordings of the system itself, with the objective of "splitting" these recordings into video clips associated to the interest in each case.

Selecting the recording on which to operate, a complete download will be made and associated to a particular directory, or a partial download.

The partial download can be made on the basis of a specific time interval, for which the start and end time of the section to be downloaded, must be indicated, or using "text markers."



IMPORTANT: If using remote viewers (e-netcamVIEWER and corporateVIEWER), two download features of the remote accesses will be incorporated and focused on the optimization of the available bandwidth, which are the following:

- **Deferred Download.** It is possible to perform the download (total or partial) of specific dates and time so that it is consumed in the bandwidth of the installation on the most advantageous time sections.

- **Recoding.** It can be recorded by selecting a new scale, quality and coding, so as to remotely download a quality commensurate with the needs of control, regardless of the original quality of the recording (which will remain intact).

NAVIGATION VIA MAPS

Description

The map allows users to locate quickly and easily any element that makes up an installation, without having to remember names or situations.

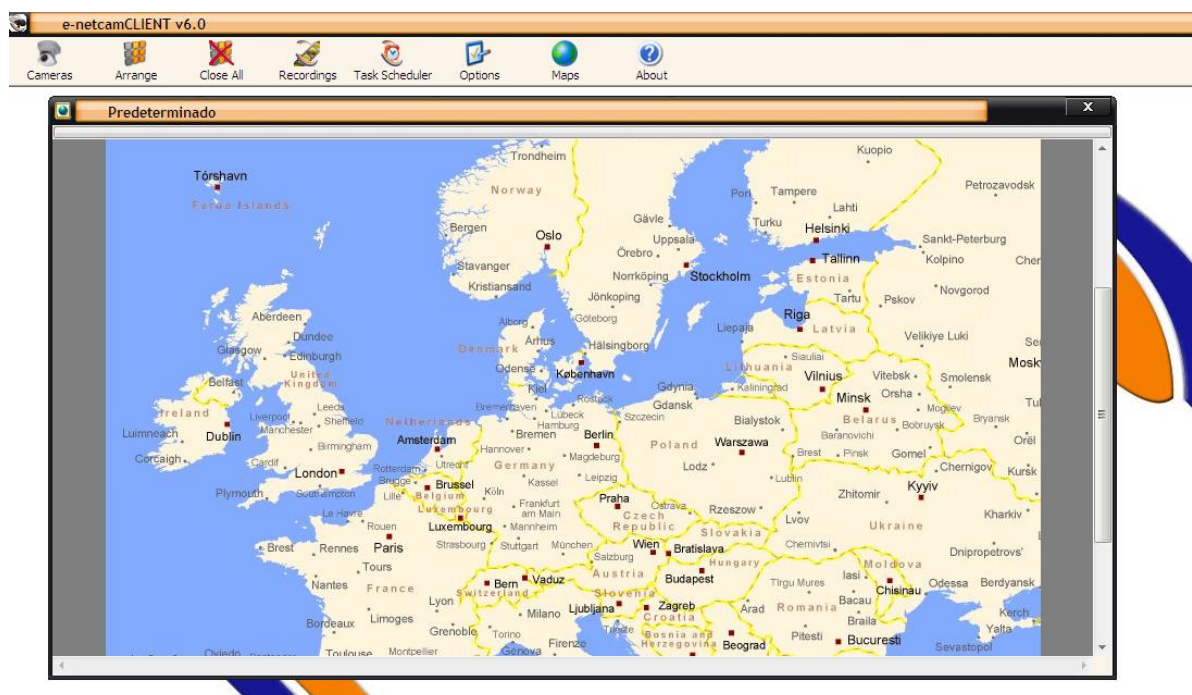
The following elements can be located:

- Cameras and video servers
- Groups
- "Salvos"
- Other maps

The elements that are desired to be located on a map must be previously added into the system, with the map feature being exclusively used to locate objects in a media visually recognizable by the operator.


The maps are graphic files with BMP, JPG or JPEG extensions, and shall be stored in a folder that the application installs directly into or allowing the user to select the location he deems most convenient.

Clicking on the icon of the maps, the application displays the following screen:



This image represents the initial map in which, upon clicking on the bar at the top of the page and in the windows of the camera, the system control buttons will appear:



The first three buttons  represent the options to move between maps, that is, going back to a previous map and moving on to the next and going up a level.



Viewing the map in Full Screen.



Map editing mode, where making changes to the elements of the map are possible. By clicking on this icon, the system activates the following buttons:



Add objects. It is used to open the Add objects window on the map.



Deletes the selected object.



Add new map to the current. Maps can be linked together for an easy hierarchical navigation.



Properties of the current map.



This icon allows you to "free" the screen and move the map across the screen or move it to another screen making up a multi-screen system.

To navigate through maps, the arrow icons representing the forward, back and previous page arrows can be used.

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