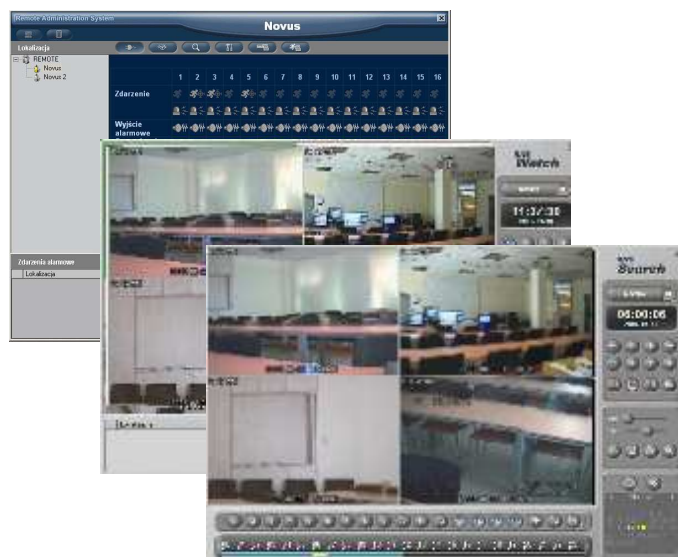
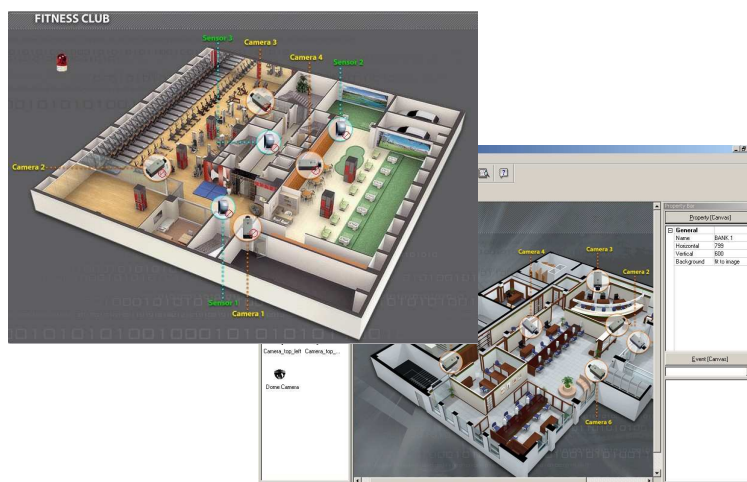


# user's manual



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# I-RAS I-MAP

Network software  
for 5000 series Novus  
DVR's

# NOVUS™

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## INFORMATION ABOUT IRAS

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### 1. FOREWORD INFORMATION

The NV-DVR5000 series DVR's come with an advanced user-friendly functions and a wide package of free customer software. These programs enable you to effectively manage through the network by means of both just one device and a complex system irrespective of the distance.

The set of programs, which come with DVR's, consists of *IRAS* and *I-MAP*.

*IRAS* enables users to connect to DVR's by means of computer network (TCP/IP protocol). *IRAS* enables users to connect to more than one DVR at a time. Live monitoring feature and recordings search are also available. Additionally, remote configuration of DVR's settings is available, too.

Password system, both on the software and DVR's level, limits the number of unauthorised users.

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#### 1.1 Main characteristics

- ✍ User-friendly interface
- ✍ 3 modules devoted to three different tasks: *Admin* - system administration, *Watch* - live monitoring, *Search* - recordings search
- ✍ Ability to connect to many DVR's simultaneously
- ✍ Ability to connect up to 10 users to one DVR at the same time (up to 2 users in search / playback mode, and up to 2 users in admin mode)
- ✍ Ability to save images displayed on the screen
- ✍ Image printing function without using additional applications
- ✍ Ability to remotely control PTZ cameras

## INFORMATION ABOUT IRAS

### 1.2. PC Hardware & Software requirements

CPU	Intel® Pentium® 1GHz (or faster)
RAM memory	256MB
HDD	8MB capacity to install software and additional capacity for video data backup
Additional requirements	VGA, AGP x 4, 16MB
OS	Microsoft® Windows2000 / XP™

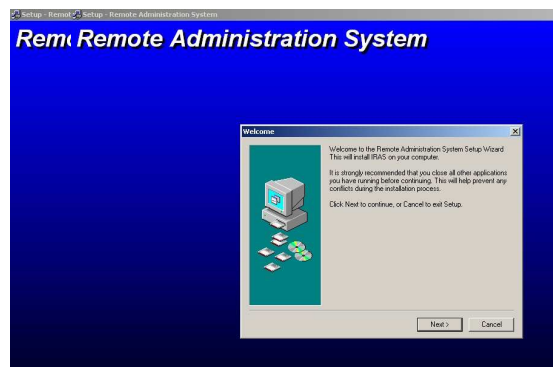
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### 1.3. Software installation

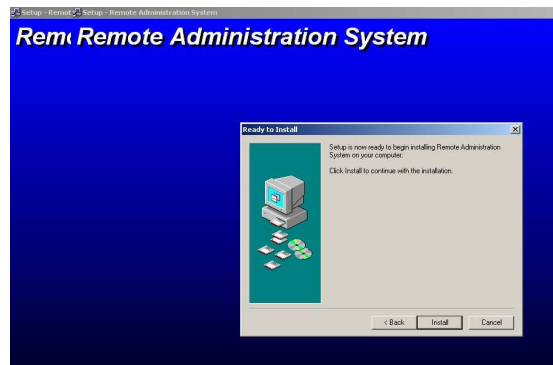
**Attention: If there is a previous version of IRAS already installed on your PC, you have to uninstall it before installing the new version.**

In order to start the installation process find *setup.exe* file on the attached CD-ROM. The installation begins after clicking on the icon twice.

When you see this window choose *Next*



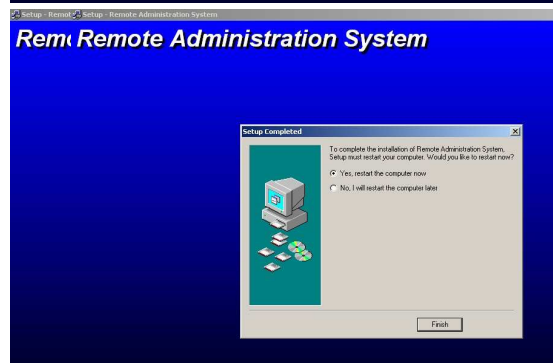
Next choose *Install*



Finally choose whether you want to restart your computer now:

*(Yes, I want to restart my computer now)*  
or later *(No, I will restart my computer later)*  
and choose *Finish*.

You need to restart your computer before the first running of the program.




## IRAS SOFTWARE OPERATION

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### 2. RUNNING THE PROGRAM

*IRAS* program is run with the use of short-cut to *Admin* icon  present on the desktop or from the Program Menu.



After a while *Admin* module window appears on the screen. At the same time the other modules are put into operation.

There is a possibility of running *Search* or *Watch* modules only from the *Start/Programs* (*IRAS* group).

Logging in is not required with the first running .

The best screen resolution is 800x600 or higher, and 24-bit color depth .

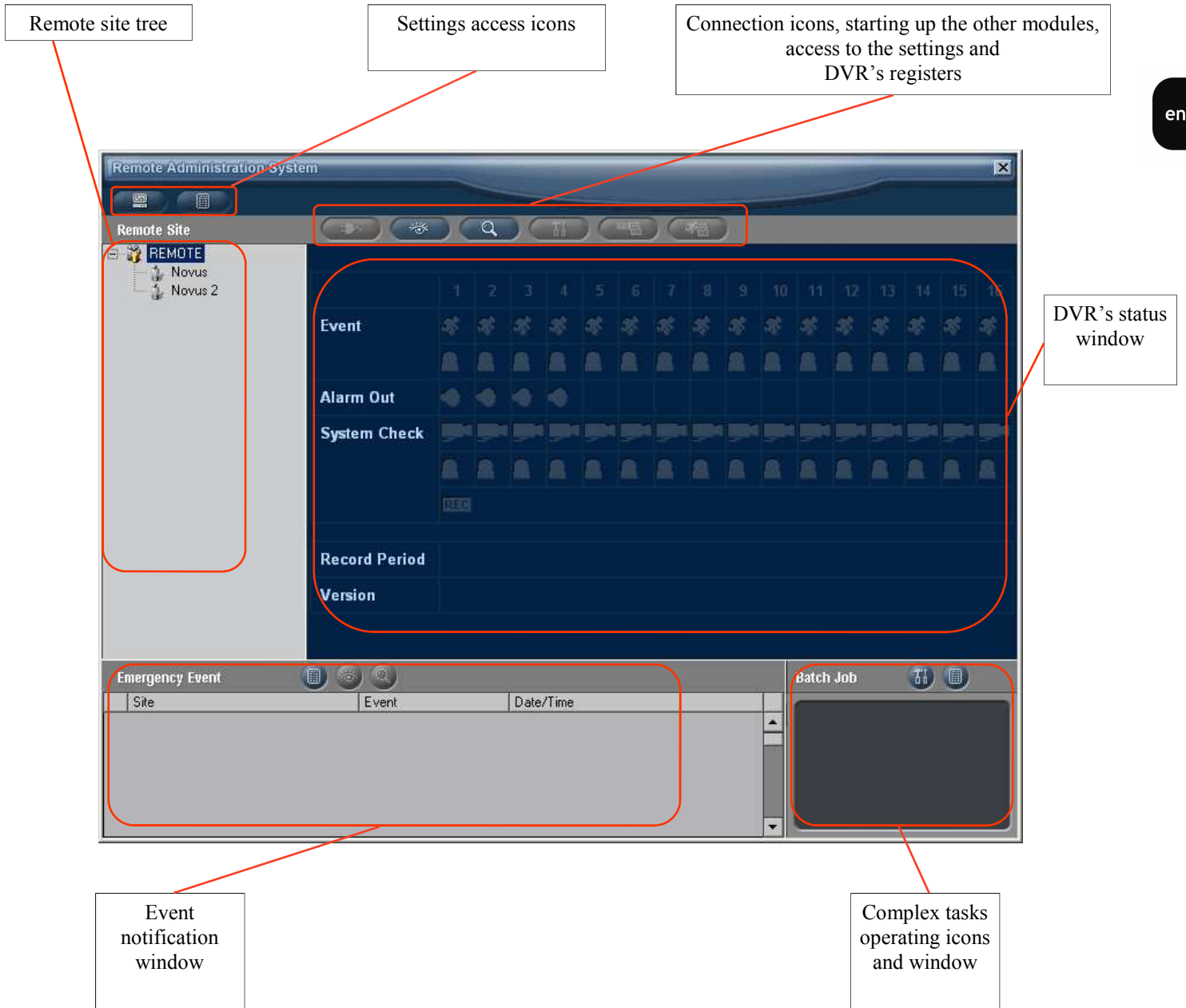
In case of detection of incompatible VGA card settings, suitable message is displayed.

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## IRAS SOFTWARE OPERATION

### 3. GRAPHIC USER INTERFACE DESCRIPTION

Interface is divided into several areas whose functions are described below. Detailed software operation instructions are included in the following chapters of this user's manual.




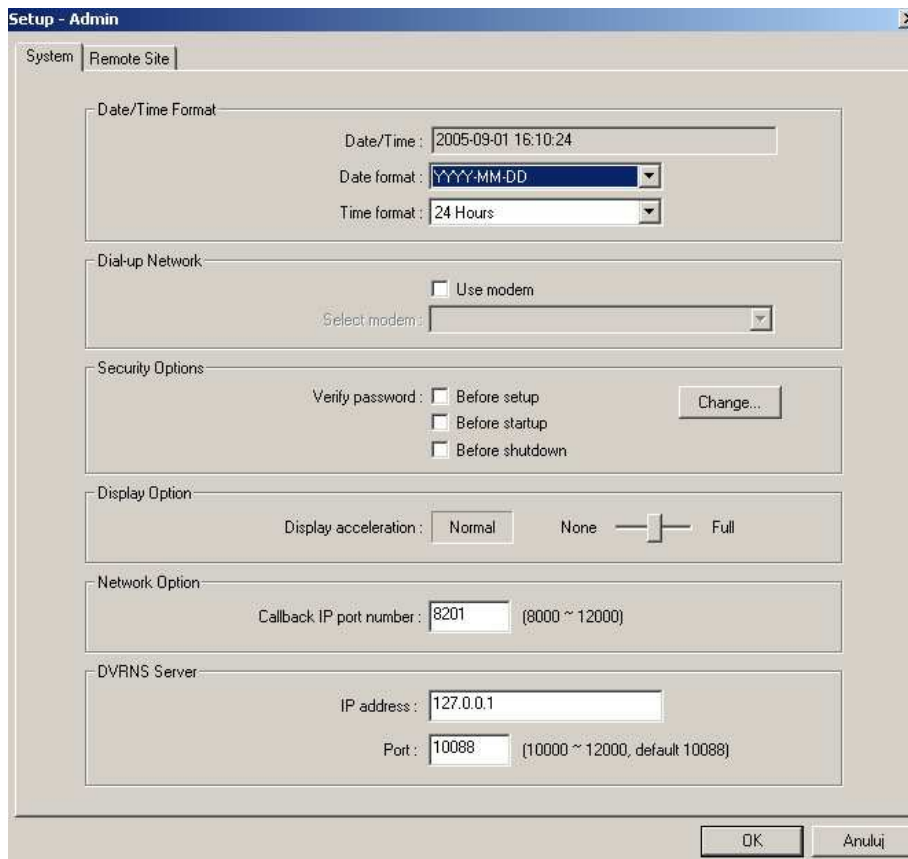
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## IRAS SOFTWARE OPERATION

### 4. PROGRAM SETTINGS CONFIGURATION

#### 4.1 System Settings

In order to enter the system settings menu terminate the connection to the DVR, click  which is present in the upper part of the window and choose **System** tab.



- In the **Date/Time Format** section current time and system date are shown. Below there is a menu allowing to change the displayed date (day/month/year) and time (12h/24h) format.
- **Dial-up Network** section enables you to switch on and choose a modem used for modem connections.
- **Security Options** section enables you to define access password. Small window appears in specific situations.





## IRAS SOFTWARE OPERATION

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After choosing *Before setup* option the system demands the password when trying to enter the described settings menu.

After choosing *Before startup* option the system demands the password when trying to start the program.

After choosing *Before shutdown* option the system demands the password when turning off the program.

In order to change the password access the *Change* menu.

In the *Old password* field input your current password (when changing password for the first time leave this space empty).

In the *New password* field input the new password and confirm it in the *Confirm new password* field

- *Display Option* section enables you to adjust the hardware acceleration level and Direct X function to computer's VGA card capabilities. Depending on VGA card efficiency you can choose one out of three levels. *Full* option is intended for the latest, most efficient cards with a fast graphic memory.
- *Network Option* section enables you to choose a port, which is used for callback connections in case DVR detects specific events. It is possible to choose any port from the 8000~12000 range.
- *DVRNS* section allows to set the address and communication port for DVRNS server.

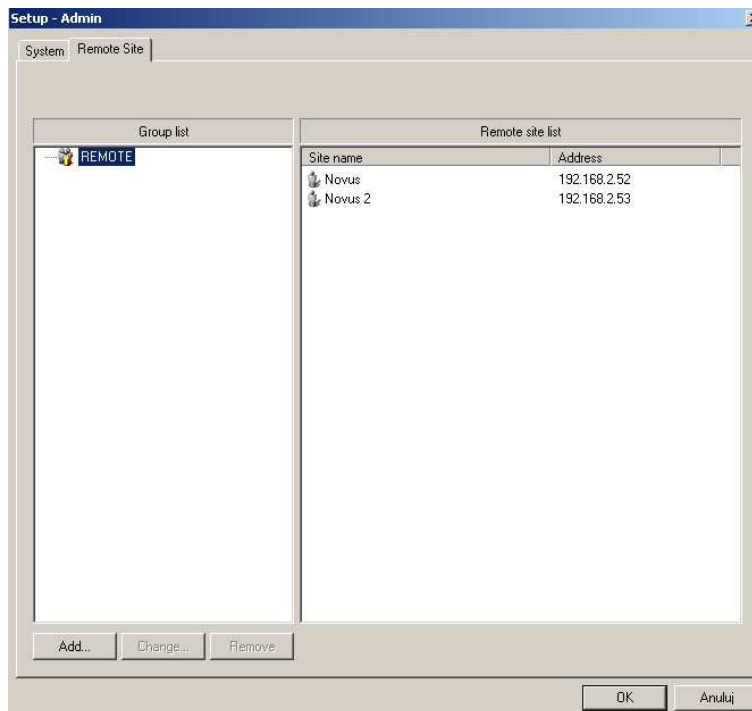
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## IRAS SOFTWARE OPERATION

### 4.2 Remote Sites Parameters Defining

A site is a notion defining a DVR connected to a network. Such a DVR has a specific name and network parameters (address, ports etc.).

After choosing *Remote Sites* tab the following menu appears.



There is a list containing site groups on the left hand side. In order to make managing easier and increase clarity, users are encouraged to use the groups with a big number of sites.

The only default group is the *REMOTE* group. On the right, there are sites which a part of a given group. In order to add a group or a site choose *Add...*



## IRAS SOFTWARE OPERATION

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- In the *Reference Group* section users can choose a group or after clicking *Add...* create a new one.
- In the *Remote Site Setup* section site parameters are defined.
  - Site name* - any site name e.g. Novus
  - IP Address* - internet protocol address
  - Use modem* - has to be chosen if the connection is modem to modem
  - Phone Number* - target number with modem connections
  - Use DVRNS (DVR Name Service)* - it has to be ticked when a domain server is used for connections with a dynamic IP
  - DVR Name* - DVR's domain name used instead of IP address
- In *Login Setup* section you put user name and password to log in to the DVR. The user account has to correspond to an account created in DVR's settings.
  - In the *User ID* field enter user ID.
  - In the *Password* field enter password
  - In the *Confirm Password* enter the password again.
  - In case of logging in without password *No password* option has to be ticked.

In order to save changes click *OK*. By clicking *Cancel* you leave the window without saving changes.

In order to make changes in an existing site or group, choose it from the list and click *Change...*

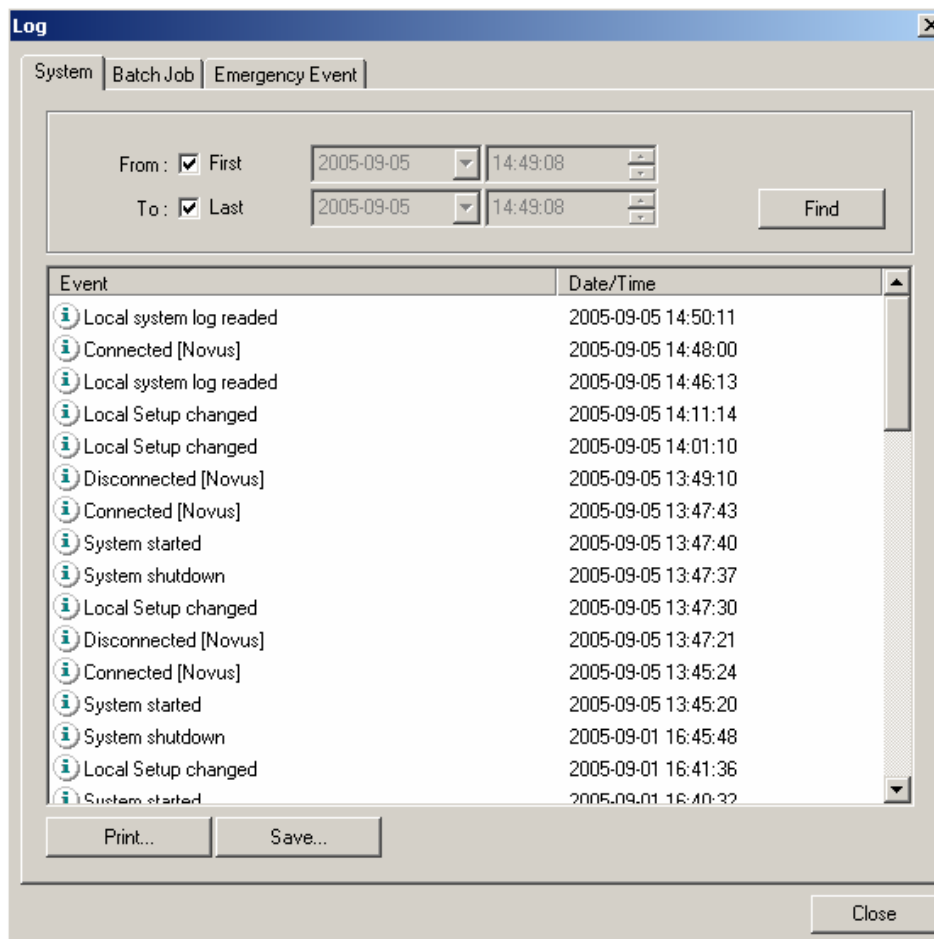
In order to remove an existing site or group, choose it from the list and click *Remove...*

## IRAS SOFTWARE OPERATION

### 4.3 Program Register

In order to enter program register click  present in the upper part of the window.

The first part of the register (**System**) consists of records concerning program operation and setting changes from its installation up to now.



In order to display an event click **Find**.

In order to display all the events from the very beginning tick **First**.

In order to display events up to now tick **Last**.

You can display events from a specific period only. In order to do that untick **First** and/or **Last** options, choose the beginning of the period you are interested in (**From**) and the end of it (**To**).

The displayed events can be saved in the form of a text file. In order to do that click **Save...** and indicate the path and the name of the file.

The displayed events can be printed. In order to do that click **Print...** and choose printing parameters.

## IRAS SOFTWARE OPERATION

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The second part of the register (*Batch Job*) is devoted to events concerning complex tasks performed by the program such as DVR's software update etc. All the details regarding tasks are in the chapter 4.4.

Filtering, saving and printing options, described on the previous page, are also available for this part of the register.

The third part of the register (*Emergency Event*) is devoted to events concerning answered feedback connections informing about events such as motion detection, detected by the DVR. Details regarding feedback connections function can be found in the user's manual.

Filtering, saving and printing options, described on the previous page, are also available for this part of the register.


In order to close the window click *Close*.

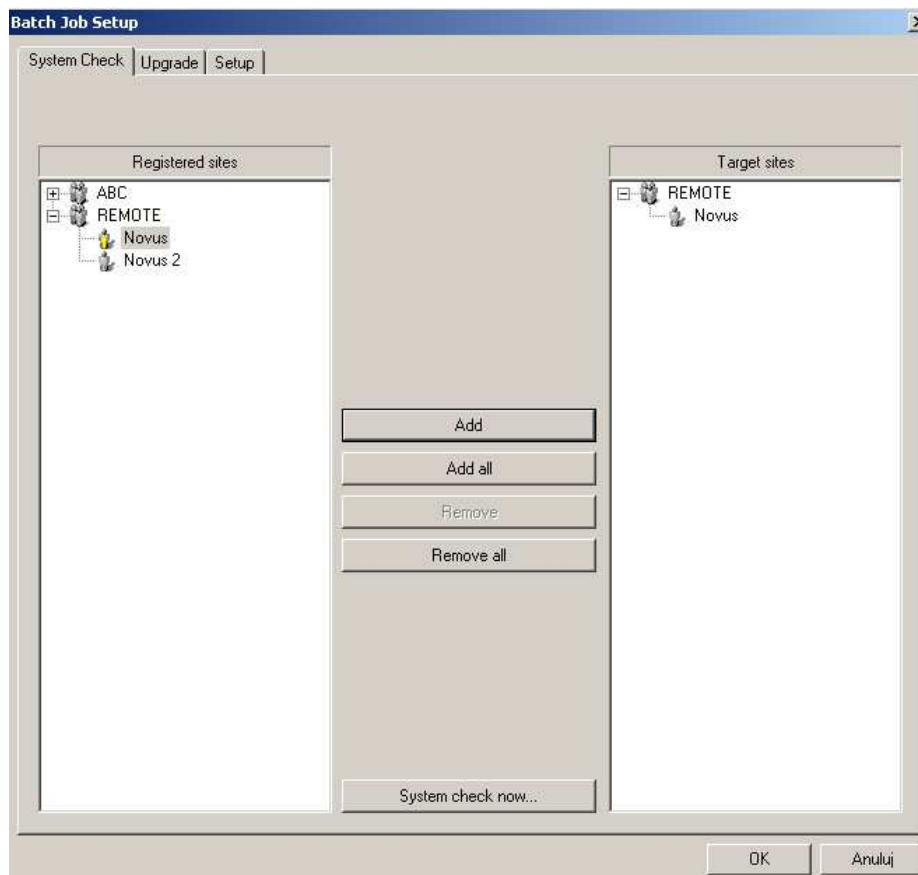
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## IRAS SOFTWARE OPERATION

### 4.4 Administration

*IRAS* software allows the operator to perform some complex administration tasks e.g. simultaneously on more than one DVR. It is a useful tool in case of administering a big number of DVR's.

In order to enter the task menu terminate all existing connections and click  at the bottom right hand side part of the main window.



Function window is divided into three tabs.

The first of them (*System Check*) allows you to check the status of any number of DVR's at a time. In order to do that choose sites from the list of defined sites in the program which are involved. From the list of available sites (*Registered Sites*) tick a desirable site and click *Add*. The site appears on the list (*Target Sites*) on the right hand side of the window. In order to choose all the defined sites click *Add all*.

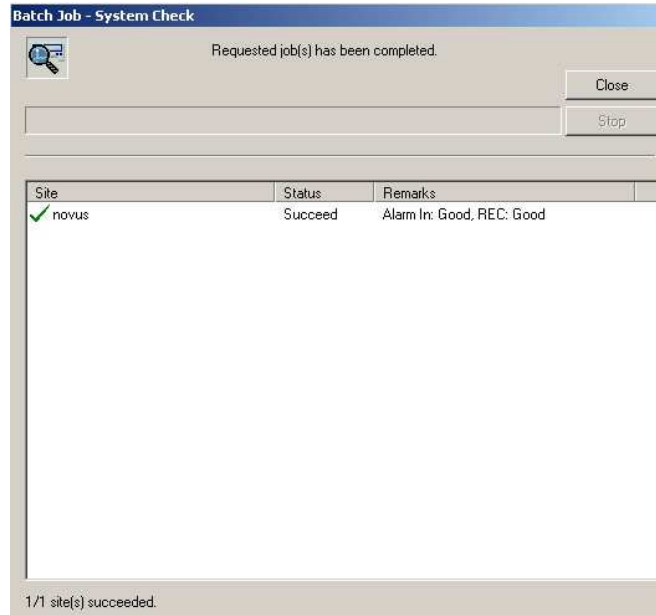
In order to remove a chosen site from the list, tick it and click *Remove*.

In order to remove all chosen sites at a time click *Remove All*.

In order to check the status of chosen DVR click *System check now...*

## IRAS SOFTWARE OPERATION

The program establishes connection to each DVR and gathers information from System Check module (if this option is enable).



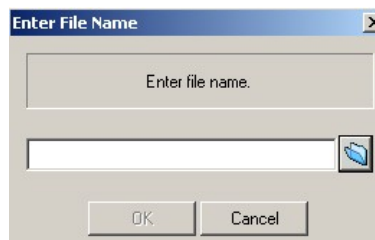
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The information about the last task can be found at the bottom right hand side of the main *Admin* module.



The second part (*Upgrade*) allows users to install new software on any number of DVR's at a time. Choosing and removing sites is performed in the same way as with the previous function. In order to install new software on chosen DVR click *Upgrade now...*

After a while you are asked about a file path with (\*.rui) software. After choosing the file click OK to start software update.



The third part (*Setup*) allows to install DVR's settings file. Choosing and removing sites is performed in the same way as with the previous functions. Simultaneously you can perform such an operation just for one DVR . In order to install settings for a chosen DVR click *Setup now...*

After a while you are asked about a file path with (\*.cfg) settings. After choosing the file click OK to start settings update.

## IRAS SOFTWARE OPERATION

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### 5. SITE CONNECTION AND MANAGEMENT—*ADMIN* MODULE

The 5000 series DVR's have a bandwidth adjustment function in computer networks.

The adjustment is done in the *Network* submenu. You can access this menu both locally and remotely from *Admin* module. Thanks to that users can adjust the transfer to current conditions.

Depending on the network bandwidth and administrator recommendations there is a possibility of adjusting the maximum *Transfer Speed* given in Kb/s or Mb/s.

Additionally, in order to adjust picture refresh rate you need to choose one of quality levels (*Quality*).

The lowest quality, the quickest refresh rate - choose *Low*.

The best quality, the slowest refresh rate - choose *Very High*.

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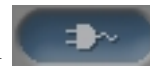
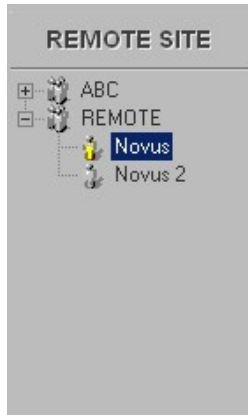




## IRAS SOFTWARE OPERATION

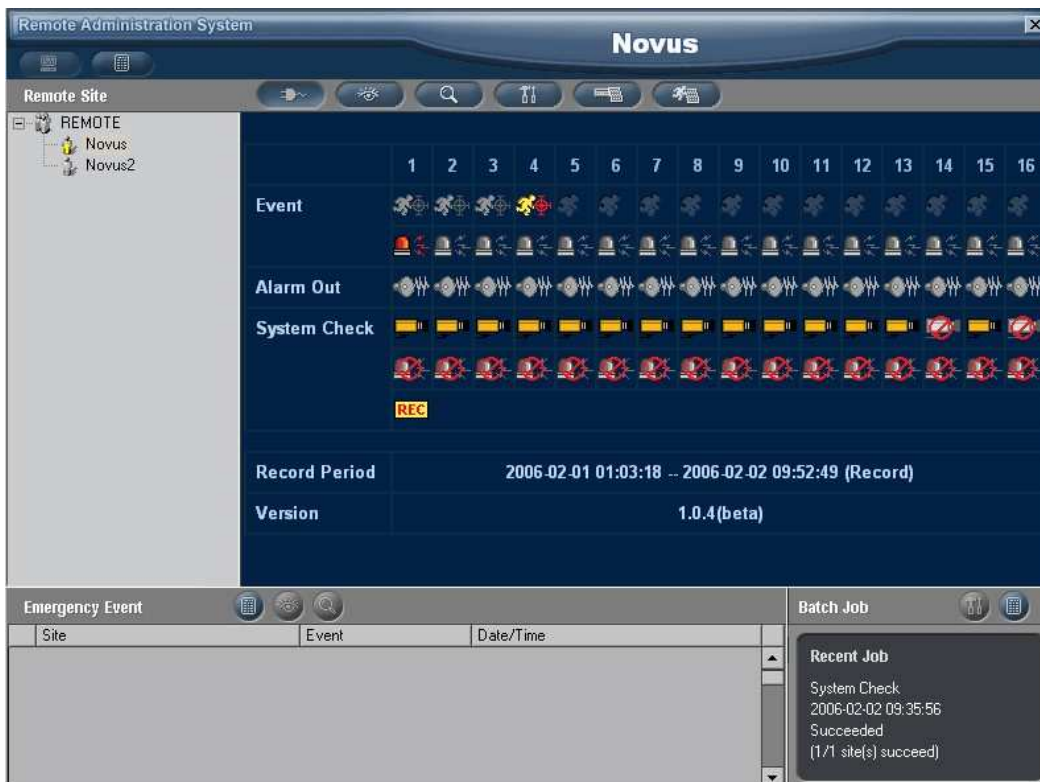
### 5.1 Establishing Connection and its Termination from *Admin* Module

In order to establish a connection with a given site you need to choose its name on the site tree



and click the left mouse button twice or click the connection icon

If the written-in data are correct and the device is physically connected to the network, the connection should be established after a while. The icons in the status window change their color and become active, and in the window above, a site name, with which the connection is currently established, appears.



In order to terminate the connection you need to click the connection icon again or choose another site.

The system asks you if the connection should be terminated, and you terminate it clicking *OK*.

## IRAS SOFTWARE OPERATION

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### 5.2.2 Current DVR Status Verification

Owing to graphic interface status window *IRAS* system enables you to evaluate the state of a site right after establishing a connection.

The status window is divided into five sections. On the very top there are numbers of such elements as video, alarm inputs etc. There are 16 elements in the example. With 9-channel models there are 9.

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The first section - *Event* shows motion detection status and alarm inputs. Meaning of the icons:



- motion detection is not switched on for the given video channel



- motion detection is switched on for the given channel, no motion has been detected



- motion has been detected for the given channel



- given alarm input is not switched on



- alarm input is switched on but it is not activated at the moment



- alarm input is activated at the moment

The second section - *Alarm Out* shows alarm output status. Meaning of the icons:



- given alarm output is inactive



- given alarm output is active

## IRAS SOFTWARE OPERATION

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The third section - *System Check* provides information from the diagnostic system. Description of its operation is in user's manual. Meaning of the icons:



- video signal check-up is not switched on for the given channel



- video signal from the given camera is correct



- signal from the given camera disappears temporarily or permanently



- alarm input status check-up is switched off



- alarm input is in "good" condition, means that during check period there was at least one activation



- alarm input is in "bad" condition, means that during check period there was no activation

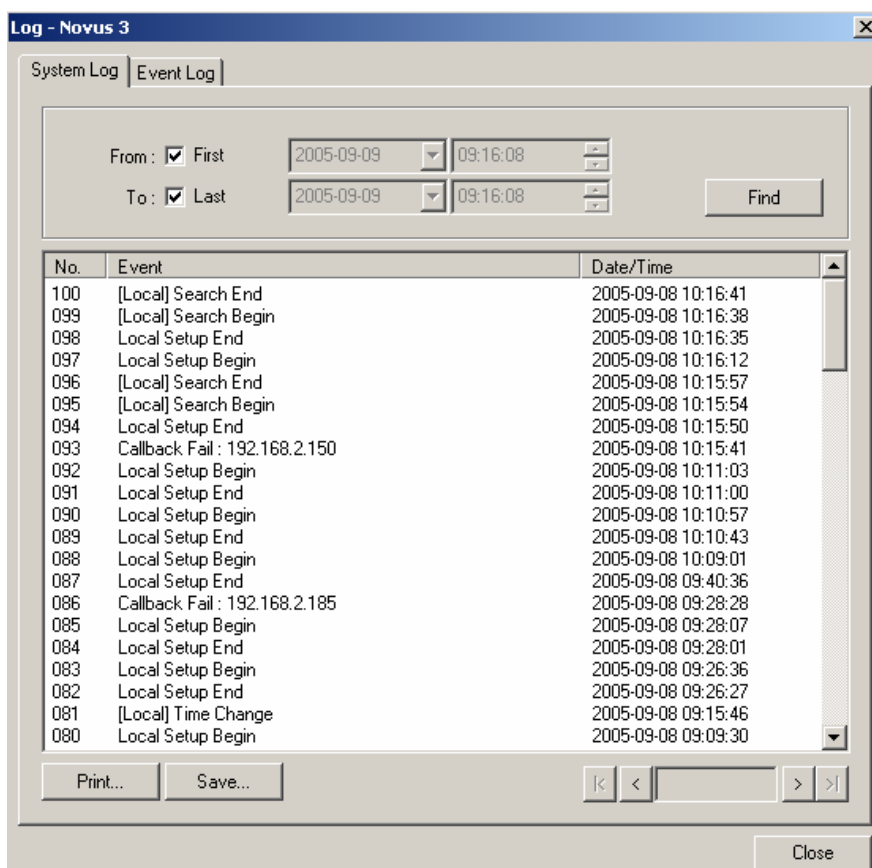
The fourth section - *Record Period* gives information about the period from which recordings have been saved on DVR's hard drives. The first date and time refer to the beginning of the oldest recording, the second to the latest.

## IRAS SOFTWARE OPERATION

### 5.3 DVR History Verification

IRAS software allows remote DVRr's register status check-up, with which the connection is established at the moment. DVR's history is found in two registers: system register and event register.

In order to enter the system register click  in the upper part of the window.



In order to display an event click *Find*.

In order to display all the events from the very beginning tick *First*.

In order to display events up to now tick *Last*.

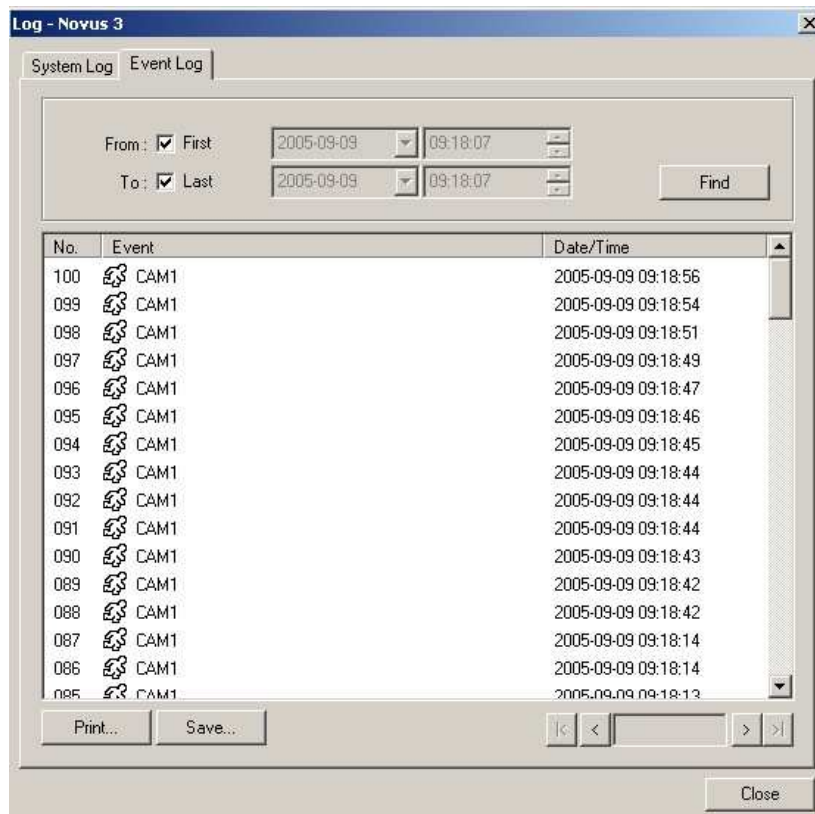
You can display events from a specific period only. In order to do that untick *First* and/or *Last* options, choose the beginning of the period you are interested in (*From*) and the end of it (*To*).

The displayed events can be saved in the form of a text file. In order to do that click *Save...* and indicate the path and the name of the file.

The displayed events can be printed. In order to do that click *Print...* and choose printing parameters.

## IRAS SOFTWARE OPERATION

In order to enter the event register click  in the upper part of the window.



In order to display an event click *Find*.

In order to display all the events from the very beginning tick *First*.

In order to display events up to now tick *Last*.

You can display events from a specific period only. In order to do that untick *First* and/or *Last* options, choose the beginning of the period you are interested in (*From*) and the end of it (*To*).


The displayed events can be saved in the form of a text file. In order to do that click *Save...* and indicate the path and the name of the file.

The displayed events can be printed. In order to do that click *Print...* and choose printing parameters.

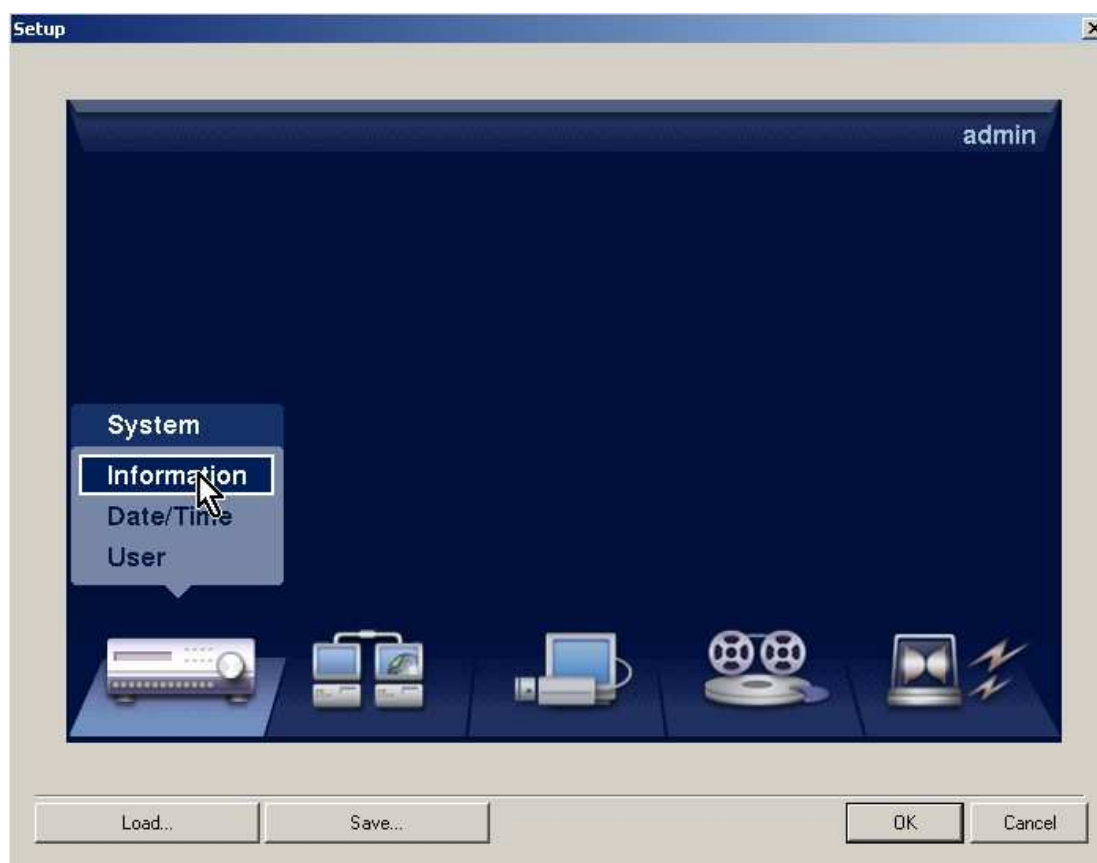
## IRAS SOFTWARE OPERATION

### 5.4 DVR Remote Configuration

Owing to *IRAS* software users can remotely configure DVR's, with which connection is currently established. In order to change settings you have to be logged in as the administrator.

In order to enter remote configuration menu click 

After a while a configuration window, resembling DVR's screen menu, appears on the screen .



Use the mouse to move around the window.

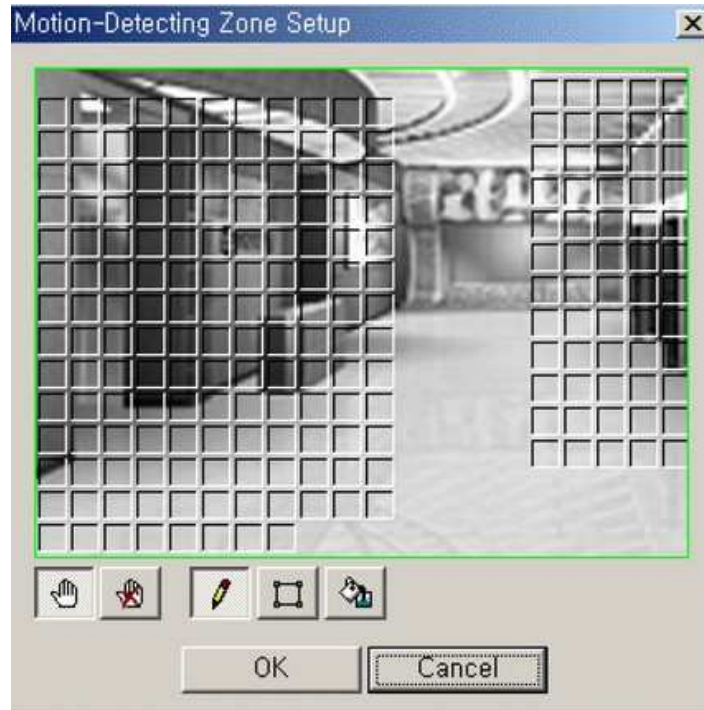
To make all the changes in particular submenus you need to click **Save** (not to be mixed up with the **Save...** on the very bottom of the window). But if you want the changes to be sent to the DVR click **OK**. Clicking **Cancel** means no changes that have been made, are sent to the DVR.

DVR's settings can be downloaded and saved on a computer, and used later if needed. In order to save settings from a given DVR click **Save...** and give a name and a path. In order to install a previously saved file click **Load...** and choose the file.

For safety reasons the menu displayed on the screen lacks a few positions which are available only directly from the DVR; these are date/time, discs, closing of the system, logging out.

## IRAS SOFTWARE OPERATION


The meaning of specific setting menu elements can be found in DVR's user's manual.  
The only setting which is not configured from the local menu is motion detection grid setting.




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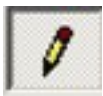
After entering the motion detection grid editing section for a given camera, an image from this camera is displayed on the screen .

In the background of this image you can mark required area where the motion detection is active. Motion detection grid editing, consisting of 16x16 blocks, is performed in two modes: block activating and deactivating.

In order to activate specific blocks the icon  should be chosen

In order to deactivate specific blocks the icon  should be chosen

There are three tools available during the editing:



Allows to edit single blocks by clicking the cursor



Allows to edit rectangular areas by clicking and dragging the cursor



Allows to edit the whole image just with one click

Clicking **OK** means saving changes, clicking **Cancel** means leaving the menu without saving.

## IRAS SOFTWARE OPERATION

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### 5.5 Callback Connections Monitoring

The 5000 series Novus DVR's can establish callback connections with chosen IP addresses or telephone numbers (by means of a modem). Thanks to this function it is possible to automatically notify particular remote clients equipped with *IRAS* software about the situations which have taken place in the system. This notification appears in the *Emergency Event* part of *RAS Admin* window even if the connection with a given DVR is not established.

The only condition under which notification is received, is a proper configuration of DVR's settings (described in DVR's user's manual) and running of *IRAS* program.

Notifications appear chronologically on the list until an event has taken place; the latest notifications are on top.

Each new notification is additionally signalled by a sound (if the computer has a sound card and is connected to speakers).

Notification consists of 4 pieces of information:

- in the first column-*Site* you have site name where a feedback connection originates
- in the second column (*Event*) there is information, an icon, about an event and possibly about the name of the camera/input it refers to.



- motion detection



- video signal loss



- alarm input signal



- text-in



- inactive alarm input (signal from periodical diagnostic system)



- inactive recording (signal from periodical diagnostic system)



- HDD error (signal from S.M.A.R.T. system)



- HDD error (signal from periodical diagnostic system)



- HDD full



- HDD overheating alert




**IRAS SOFTWARE OPERATION**

- the last column (*Date/Time*) shows the date and the time of an event

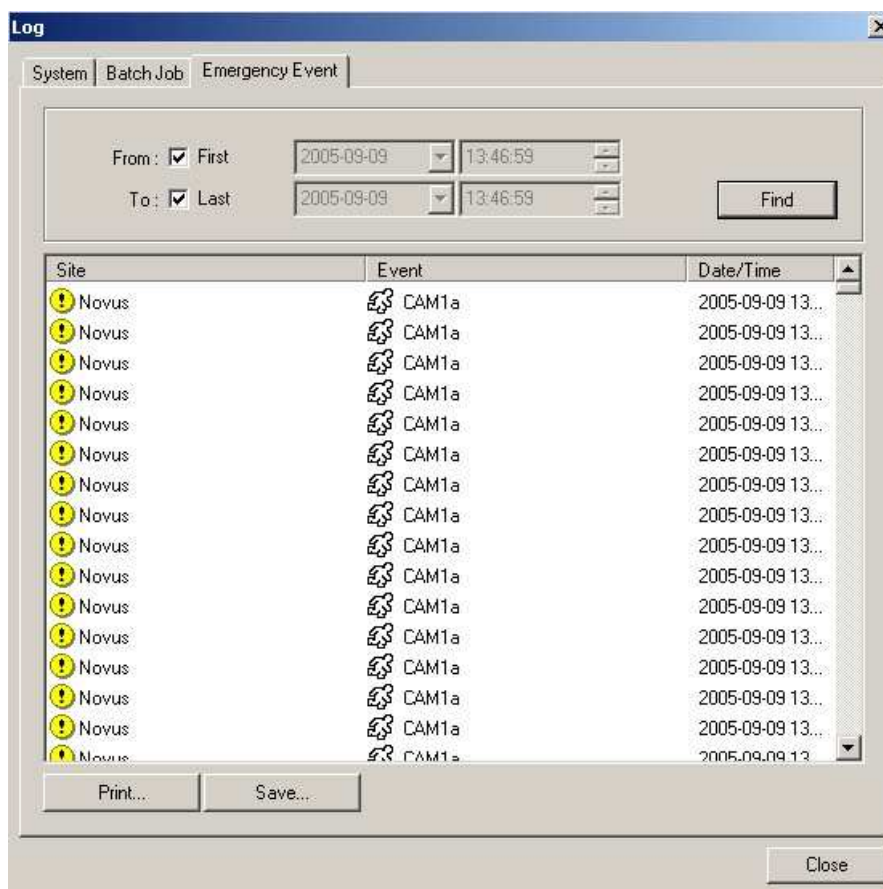
After ticking an event from the list and right-clicking, a submenu appears which allows you to:

- immediately establish connection to a given site with the help of *Admin* module (*Go to Admin*)
- immediately establish connection to a given site to watch current images from cameras of a given site (*Go to Watch*)
- immediately establish connection to a given site to watch images recorded at a given date/time and connected with the event (*Go to Search*)

**Emergency Event** list contains all notifications from the moment of starting the program.

After starting the program the list is empty. It is possible to see all the feedback connections which have taken place from the moment of software installation on a given computer. In order to do that click  which can be found just above the event list.

The list operation is the same as register operation described in the previous chapters.



## IRAS SOFTWARE OPERATION

### 6. LIVE MONITORING FEATURE - *Watch* MODULE

There is a separate module - *Watch* which is used for watching current camera images.

The module starts automatically with the start of the *Admin* module.

You can start the *Watch* module only from the computer *Start* menu.

In order to enter the *Watch* module from the *Admin* module level click



The connection is activated immediately.

In case of starting just the *Watch* module, to receive an image you need to choose a name from the site list and click



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If in the *Admin* module the password has not been saved you have to log in every time you establish the connection.

#### 6.1 Module *Watch* Window Description

The screenshot shows the RAS Watch interface with the following components labeled:

- Image display windows:** Four camera feeds are displayed in a 2x2 grid. Top-left: 'CAMA MINI' showing a meeting room. Top-right: 'NVC-SD26DN' showing a close-up of a desk. Bottom-left: 'NVC-HC370HLZ' showing another meeting room. Bottom-right: 'NVC-SD18DNA' showing a long table in a room.
- Site list, connection initiating:** A list of sites is visible at the bottom of the interface.
- System clock:** A digital clock showing '10:35:10' and the date '2006-02-02'.
- Display mode change:** A numeric keypad (1-16) used for selecting camera views.
- Settings:** A section containing icons for various camera settings and controls.
- Image parameters, PTZ camera control, alarm output control:** A section with icons for zoom, pan, tilt, and other camera functions.
- Event list:** A table at the bottom of the interface listing recent events.

Site	Event	Date/Time
Novus	NVC-SD18DNA	2006-02-02 10:35:32
Novus	NVC-SD18DNA	2006-02-02 10:35:31
Novus	NVC-SD18DNA	2006-02-02 10:35:28
Novus	NVC-SD18DNA	2006-02-02 10:35:21

## IRAS SOFTWARE OPERATION

### 6.2 Camera Image Display

In the top right hand corner there is a list of available sites, defined in the *Admin* module.

After scrolling it down you can choose a name and after clicking  a connection is established.

The same icon is used for terminating the connection.

After establishing the connection to a given site, an image, with camera description, is displayed on the screen.

In case there is no signal on a given channel *No Video* warning appears.

In case a user does not have the right to watch hidden cameras, the image from such a camera remains black.

You can watch camera images in the following way: in full screen, 2x2 split, 3x3 split, 4x4 split.

You choose the mode by clicking an appropriate icon.



Please use icons for choosing a required camera and for particular camera layouts within a certain display format.



Clicking on camera image in the screen split mode you can obtain full screen view.

There is additional information displayed on the screen along with camera images.

A clock showing DVR's date and time is displayed at the bottom. Depending on computer settings the time can differ from the one in the system window.

In the background of each camera, its name, set in DVR's menu, is displayed.

In the split mode long camera names can be cut while displaying.

If a camera is described as a PTZ camera, in the top part of the window additional description is displayed - *PTZ*.

### 6.3 Displayed Image Parameters Correction

Users can adjust some displayed image parameters.

Settings can be changed for each camera separately.

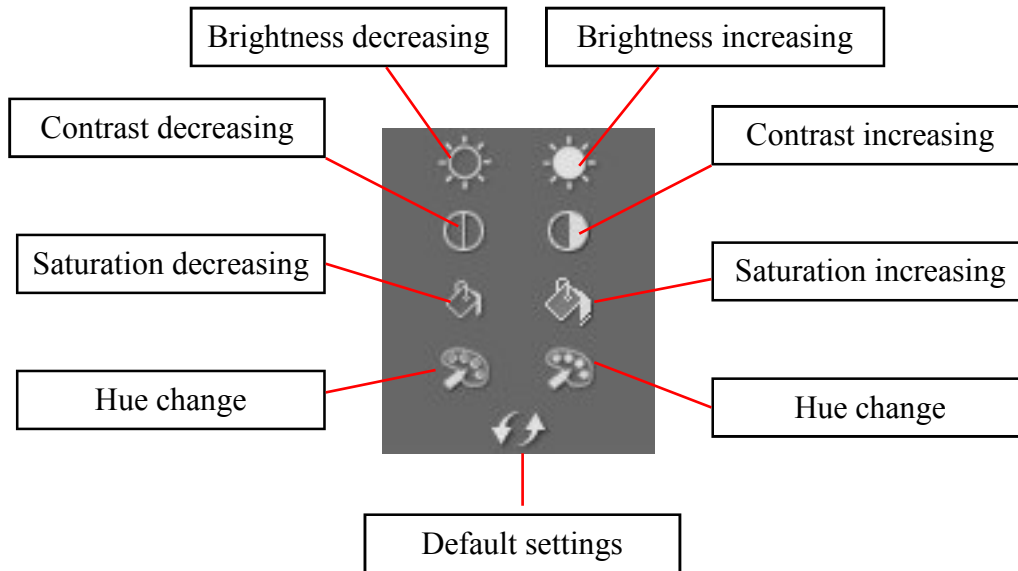
The changes are in force until default settings are brought back or you reinstall the software.

In order to open image tool palette click



## IRAS SOFTWARE OPERATION

You have the following displayed image correction functions:



### 6.4 PTZ Camera Control

If a PTZ camera is connected to the system (*PTZ* caption in the window right corner) users can remotely control it from the *Watch* module level. Connecting PTZ cameras and an appropriate DVR's menu setting configuration can be found in DVR's user's manual.

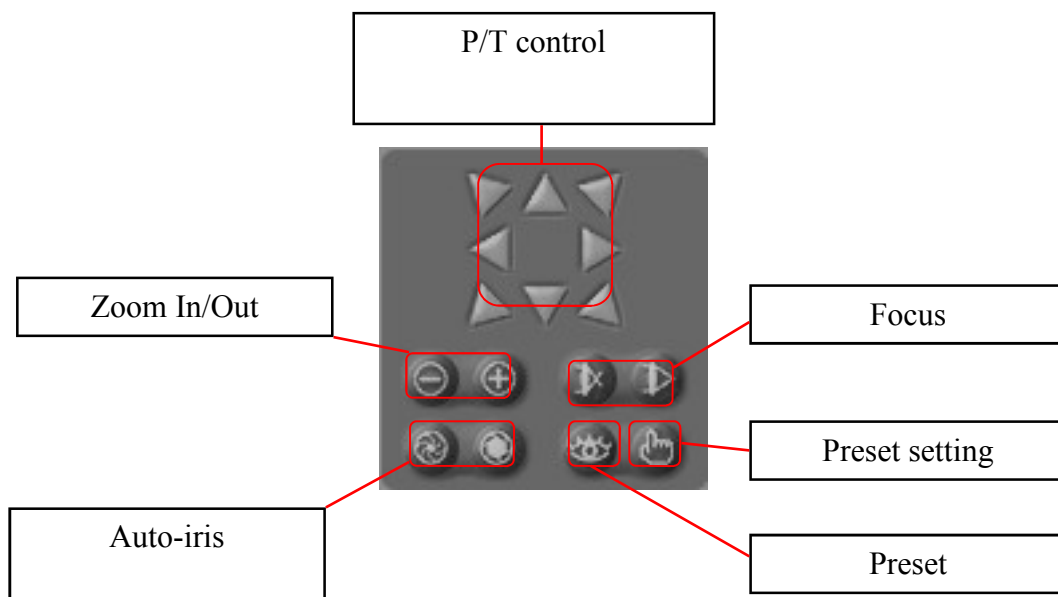
Users can control the camera both in the full screen mode and in a split mode.

In order to start camera control click on camera image. Camera window becomes surrounded by a green frame.

Next use control icons, which appear after clicking



PTZ control icons functions are as follows:



## IRAS SOFTWARE OPERATION


The following menu appears when saving presets. In order to save a given camera position under a given preset, choose a number from the list and click **OK**.



Each saved item can be named by writing the name in the **Title** field and confirming it twice.

When choosing a preset, a similar menu appears. After ticking a given position you have to confirm your choice twice so that the camera goes to the right preset.

### 6.5 Alarm Output Operation

After clicking  a menu appears which enables users to remotely switch on and off alarm outputs.

You choose alarm outputs with arrows.

After clicking **ON** you switch on a given alarm output.

After clicking **OFF** you switch off a given alarm output.



## IRAS SOFTWARE OPERATION

### 6.6 Alarm Events Operation

At the bottom part of the window there is an alarm event section, similar to the one described for the *Admin* module. The meaning of the icons and descriptions is identical as described before.

	Lokalizacja	Zdarzenie	Data/czas
	Novus 2	CAM1	2006-01-25 08:21:51
	Novus 2	CAM1	2006-01-25 08:21:49
	Novus 2	CAM1	2006-01-25 08:21:49
	Novus 2	CAM1	2006-01-25 08:21:48

In the alarm event window two main types of events, represented by two icons, are displayed:

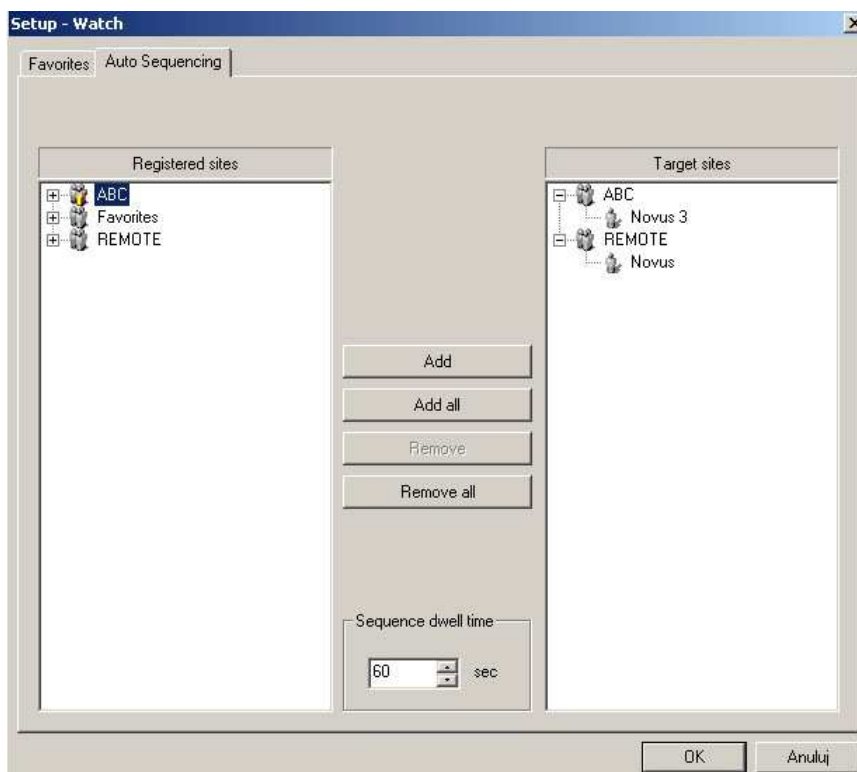
- indicates that an event has taken place, but feedback connection function was not switched on

- indicates that an event has taken place and feedback connection function was switched on

### 6.7 Site Auto Switching

*Watch* module allows users to automatically connect with chosen sites for a specific period of time. The program is in a sequence mode switching between sites when you choose present at the bottom right hand corner.

In order to change settings of the described function click and choose *Auto Sequencing* tab. The following setting window appears.



## IRAS SOFTWARE OPERATION

On the left hand side of the window available sites are grouped (*Registered Sites*). If you want the program to automatically connect to a site you have to tick the site and choose *Add*. The site appears on the list (*Target Sites*) on the right hand side. In order to choose all the defined sites choose *Add all*.

In order to remove a chosen site from the list, tick a site and click *Remove*. In order to remove all the chosen sites at a time click *Remove All*.

The time, determining how long the connection between specific sites has to be established, is given in seconds, and is set in *Sequence dwell time* position.

### 6.8 Automatic Connection

*Watch* module allows automatic connection to a chosen site after an alarm event has occurred. It works provided that feedback connection is set for an address of a computer with *IRAS* software. When such an event takes place, DVR tries to establish connection to the indicated computer.


In order to activate automatic connection function choose



For a short period of time a message appears on the screen:

*Connecting to the callback site automatically.*

It means that from this moment *Watch* module automatically connects to sites where an event has taken place. When at a given moment there is no connection to any site, the connection is established automatically. When there is a connection established with another site, the program asks the operator if they agree to terminate this connection, and if they agree to connect to the site which sends information.

Clicking  again switches it off. A message appears on the screen:

*Connecting to the callback site manually.*

It means that from this moment *Watch* module only displays information about feedback connections from a given site, and connection is established manually by the operator.

## IRAS SOFTWARE OPERATION

### 7. RECORDINGS - *Search* module

In order to watch recorded camera images you need to use *Search* module.

The module starts automatically with the start of *Admin* module.

You can start just *Search* module from the Start menu on your computer.

In order to go to *Search* module from *Admin* module click



The connection is activated immediately.

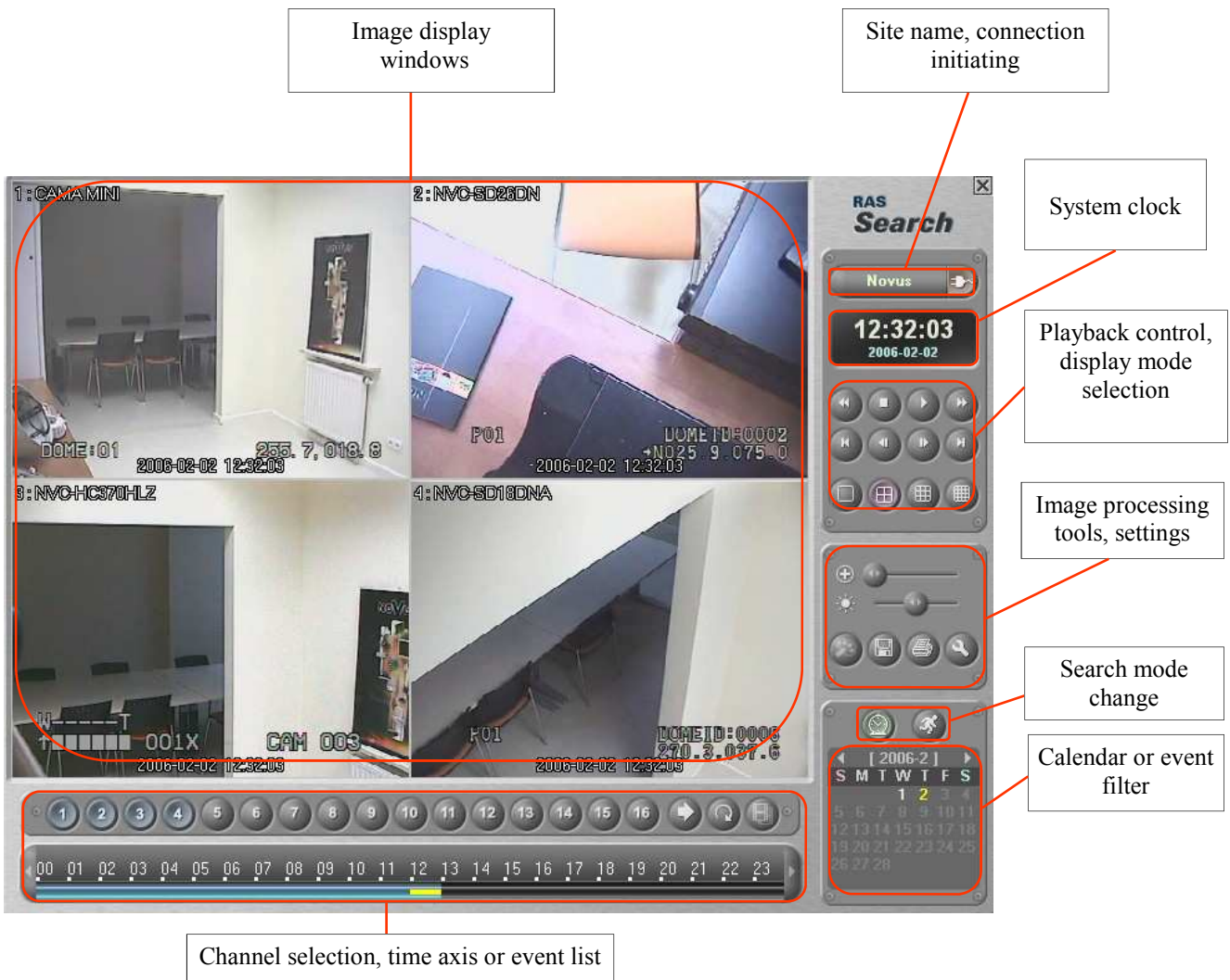
In case of starting just *Search* module, in order to receive an image you need to choose a name from

the site list and click




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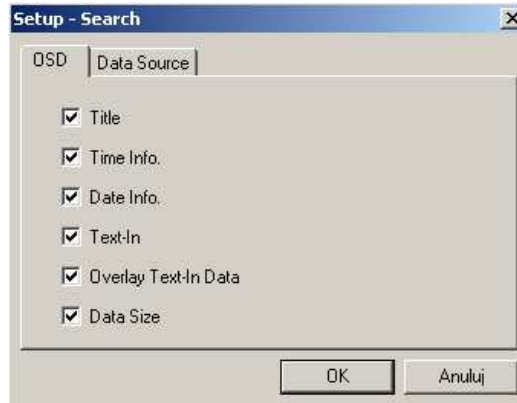
#### 7.1 Module *Search* Window Description





## 7.2 Program Settings

After clicking  a menu appears which allows users to adjust some program settings to their liking.




**OSD** tab allows you to choose which system information is displayed in the camera image background.

- **Title** - the name of a camera (upper left hand window corner)
- **Time Info.** - the time of the recording (bottom of the window)
- **Date Info.** - the date of the recording (bottom of the window)
- **Text-In** - POS transaction text (disable in this version)
- **Overlay Text-In Data** - POS transaction text (disable in this version)
- **Data Size** - image size in bytes (upper right-hand window corner)

**Data Source** tab allows to choose recording source:

- **Search on Local** - recordings coming from discs which are used for normal recording
- **Search on Archive** - recordings coming from discs, marked as an archive (both internal and external discs are applicable)

## 7.3 Searching Recordings by Date / Time

After establishing connection to a given site, you can look through the recordings, which are on DVR's discs, choosing the date and the time of a recording. In order to do that click 

In the lower right hand side of the window a calendar is displayed.



## IRAS SOFTWARE OPERATION


The calendar shows one month. Users choose the month by means of arrows.

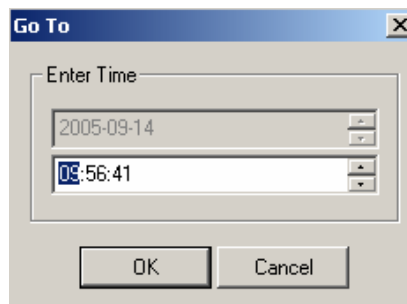
The days are grouped in columns. From the left: **S** - Sunday, **M** - Monday, **T** - Tuesday, **W** - Wednesday, **T** - Thursday, **F** - Friday, **S** - Saturday.

The days, from which the recordings are on DVR's discs, are in bold. The days, when no images were recorded, are written in regular font. You choose a day by clicking on its number. The chosen day is highlighted in yellow.



After choosing the day, time axis is displayed at the bottom. The green bar shows graphically the periods when the recordings were made. By clicking on the green bar you can specify the place of playback (highlighted in yellow) and it is accurate to within one hour.

In order to choose more precise time of playback beginning click  and input the required hour, minute, second and click **OK**

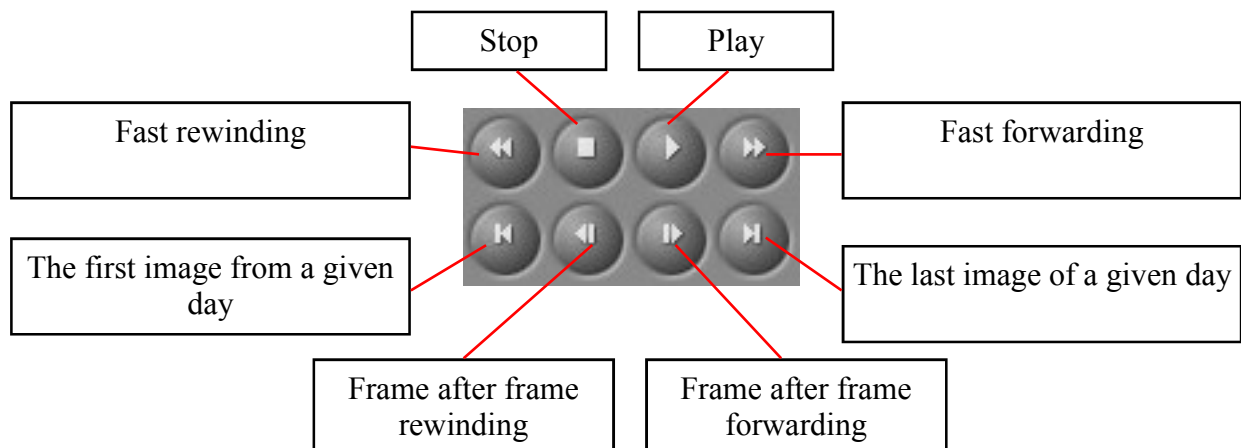


The system finds the recording from this period and displays it in the pause mode or displays information if there are no recordings from this period.

In case of low transfer speed, the image loading progress can be tracked using progress bar, displayed directly beneath image window.

In order to start playback use playback control buttons grouped under the clock.

The meaning of the icons is as follows:



## IRAS SOFTWARE OPERATION

The recordings can be watched both in the full and in the split screen mode. In order to change the display mode you need to stop the device and use the icons which can be found under playback control buttons.



If there are 2 segments from the same date / time (in case daylight saving overlap) there is a possibility to select each one by means the icon

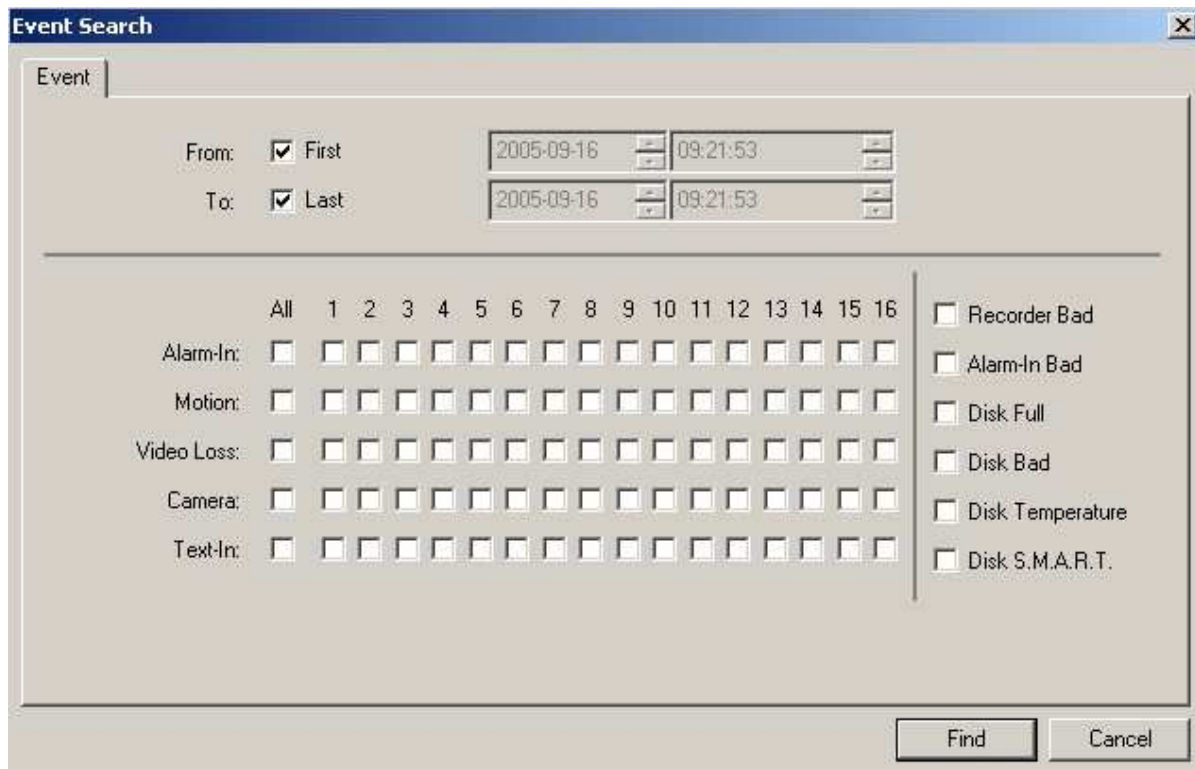


### 7.4 Searching Recordings by Events

After establishing connection to a given site, you can look through the recordings, which are DVR's discs, associated with some events. In order to do that click on



A window appears which allows you to filter event criteria.



In the upper side of the window there is a section which allows users to specify time frames of the search.

In order to retrieve all the events from the beginning of DVR's register, tick *First*.

In order to retrieve all the events up to now, tick *Last*.

Users can retrieve events from a specific period only. In order to do that untick *First* and/or *Last* options, choose the beginning of the period you are interested in (*From*) and the end of it (*To*).

## IRAS SOFTWARE OPERATION

In the lower part of the window you can find image search criteria settings.

Users can choose from the following events:

**Alarm-In** (external alarm)

**Motion** (motion detection)

**Video Loss** (video signal loss)

**Camera** (all the events connected with a given video channel)

**Text-In** (POS and cash machine transactions)

It is possible to connect any number of event types.

For each event it is possible to define camera (input) numbers used when searching (numbers from 1 to 16)

All function allows users to tick/untick all 16 positions simultaneously.

**Recorder Bad** (System Check module found that there was no recording in selected time period)

**Alarm-In Bad** (System Check module found that there was no external alarm in selected time period)

**Disk-Full** (HDD is full)

**Disk Bad** (disc problem)

**Disk Temperature** (temperature threshold exceeding)

**Disk S.M.A.R.T.** (HDD errors detected by S.M.A.R.T. system)

After selecting the criteria click **Find** to start database search.

**Searching...** appears on the screen.

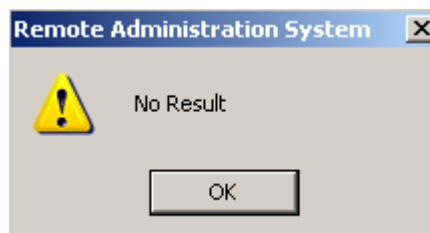
Clicking **Cancel** allows to go back without starting the search.

After some time, it depends on the range of data searched, the result in the form of a list is displayed at the bottom of the module window e.g.:

Site	Event	Date/Time
Novus	NVC-SD18DNA	2006-02-02 10:35:32
Novus	NVC-SD18DNA	2006-02-02 10:35:31
Novus	NVC-SD18DNA	2006-02-02 10:35:28
Novus	NVC-SD18DNA	2006-02-02 10:35:21

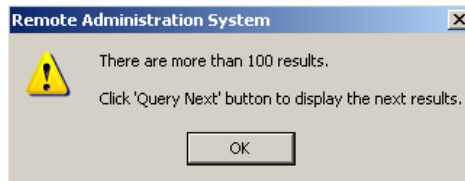
Position highlighting is similar to **Watch** module. By choosing specific position users can start recording playback connected with a given event.

When there are no events found, which fulfil given criteria, the following information is displayed:



## IRAS SOFTWARE OPERATION

When over 100 events meet the required criteria the following information is displayed:



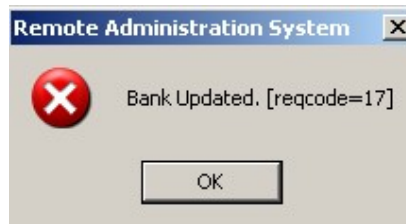
The first 100 positions are displayed on the event list . In order to display the following events click on the *Query Next* icon



In order to change search criteria click *Query* icon



The limited size of disk storage together with an impressive Event Log (up to 10000 events) can result in a situation where there is an event in the Event Log but there isn't a video recording connected with it (it has been overwritten). In case the only event in the Event Log that meets the search criteria is outside the range of video recording, the system displays the following information:



### 7.5 Image Editing

*Search* module has built-in tools allowing users to slightly change playback image. These changes allow, in some situations, better interpretation of the details users are interested in.

Graphic interface elements responsible for changes in images are grouped on the right hand side of the window, under the display mode change icons.



- digital zoom, slider allows to increase digital zoom

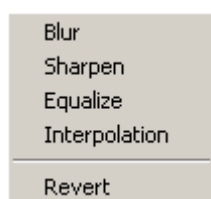


- brightness, slider allows to smoothly adjust image brightness

In order to change the described parameters you need to stop playback. After the changes have been made you can start playback with the changed zoom and brightness.



- icon activating digital filter menu, digital filters can be used only for images stopped in the pause mode, after playback restart, filter functioning is cancelled.



*Blur* - blurring filter

*Sharpen* - sharpening filter

*Equalize* - contrast equalizing filter

*Interpolation* - used for digital zoom blurring

*Revert* - cancelling filter effect, return to original image

## IRAS SOFTWARE OPERATION

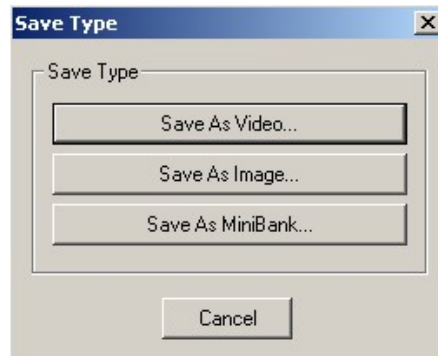
### 7.6 Saving Recordings on a Computer, Printing

*Search* module allows users to save recordings in the form of a single picture or video material.

In order to save recordings click on 

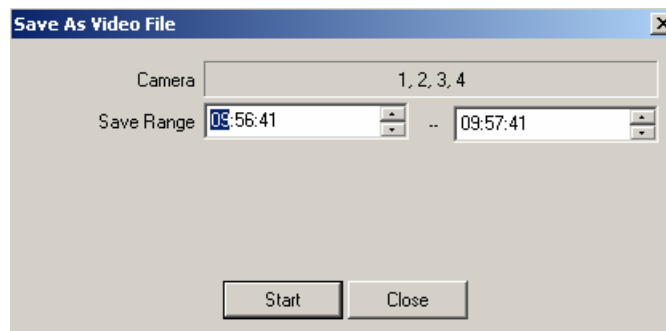
Recording saving is only available after stopping playback.

The following menu appears and you need to choose one out of the three options:



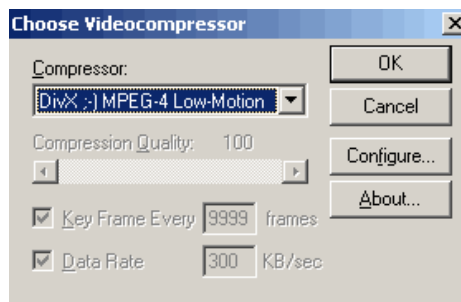
*Save As Image...* - this function allows to save currently displayed image as JPEG or BMP file. The information about the time of file creating is saved simultaneously.

*Save As Video...* - this function allows to save currently displayed image as AVI file.



Users can define the period of time that is saved.

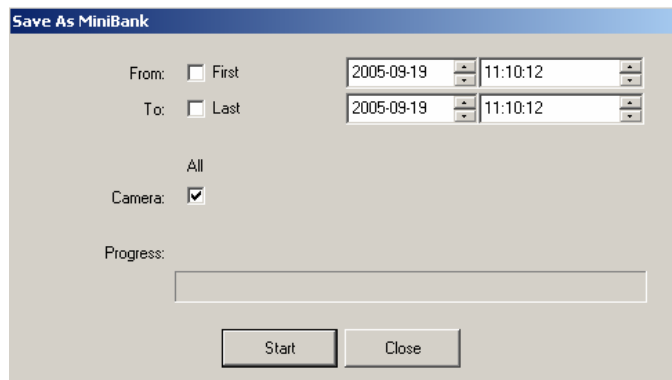
After clicking **Start** the system asks the name of the file and the type of video compression.



Attention: It is advised that the size of the AVI file does not exceed 2 GB.

## IRAS SOFTWARE OPERATION

**Save As MiniBank...** - this function allows users to save recordings in the form of a special format. This format creates **.exe** files. These files allow users to simultaneously save images from all the cameras. You can play them back in any split. Another advantage this format has is that fact that it does not need any video coders or players. It looks as if the files have a built-in player, which additionally has recording authenticity verification function. Users can specify the range of the recording time which is saved.



**Print** - this function allows users to print current image on a printer that is connected to the computer.

## IMAP SOFTWARE

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### 8. FOREWORD INFORMATION

On a CD, which accompanies the 5000 DVR series, apart from *IRAS* software you can also find IMAP software.

*IMAP* program makes CCTV operation easier by displaying maps of the protected area. On these maps there are icons which stand for actual position of system elements (cameras, detectors etc.). The program allows users to watch camera images and control alarm outputs just by clicking on the icons. Additionally, the system can work entirely automatically displaying camera images from the fields where motion has been detected.

Map creating takes place in the attached module editor. Users can use object charts, created in any graphic program in the form of BMP and JPG files, as map background

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#### 8.1 Main characteristics

- ✍ User-friendly interface
- ✍ 2 modules devoted to two different tasks: *IMap* - object monitoring, *IMap Editor* - creating object maps
- ✍ Icon system symbolizing system elements with signalling current element status
- ✍ Automatic image display in the form of pop-up windows
- ✍ Alarm outputs control
- ✍ PTZ cameras control
- ✍ Receiving messages informing about events
- ✍ Possibility of creating maps which consist of physical elements connected to more than one DVR
- ✍ Possibility of creating multilevel maps with connections between them



## INFORMATION ABOUT IMAP

### 8.2. PC Hardware & Software requirements

CPU	Intel® Pentium® 1GHz (or faster)
RAM memory	256MB
HDD	30MB capacity to install software
Additional requirements	VGA, AGP x 4, 16MB
OS	Microsoft® Windows2000 / XP™

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### 8.3. Software installation

**Attention: If there is a previous version of I-MAP already installed on your PC, you have to uninstall it before installing the new version.**

In order to start the installation process find *IMapsetup.exe* file on the attached CD-ROM. The installation begins after clicking the icon twice.

When you see this window choose *Next*



Next choose the space on the disc where the program should be installed and click *Next*

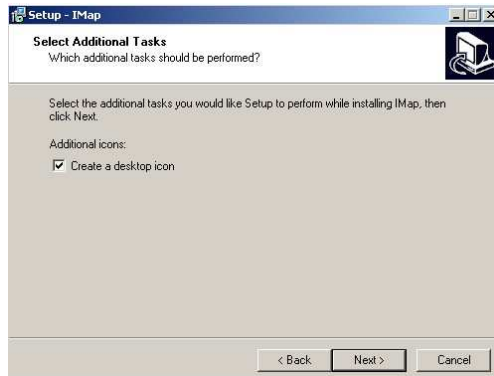


Next choose where in the *Start* menu the system should create the shortcut to the program and click *Next*.



## I-MAP SOFTWARE OPERATION

In the next window choose whether you want the system to create shortcuts to program modules (*Create a desktop icon*) and click *Next*.



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Next click *Install ...*



... and finally *Finish*




If the *Launch IMapEditor* option has been chosen, map editing module is run automatically.

## I-MAP SOFTWARE OPERATION

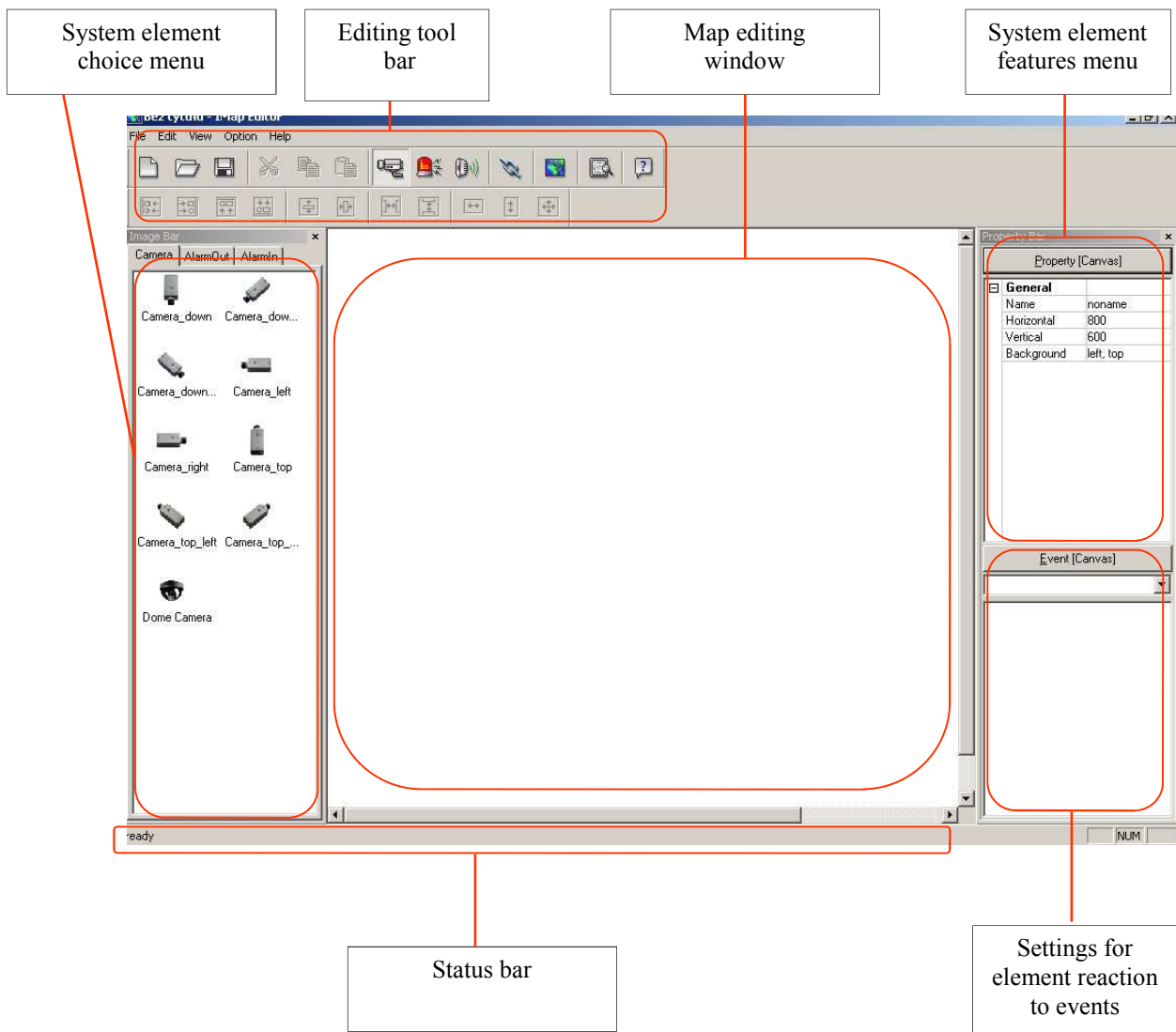
### 9. TWORZENIE MAP OBIEKTÓW - MODUŁ *IMap Editor*

*IMap Editor* module is used for creating object maps by the users using their own graphic files and ready-made elements - icons.

You start the module by clicking  IMapEditor

#### 9.1 Module *I-Map Editor* Window Description

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**View** menu allows users to choose which of the tool bars and menus are displayed.

## I-MAP SOFTWARE OPERATION

### 9.2 Own Site Scheme Creation

In order to start the process of creating a new map you need to create a new project. In order to do that choose from the **File** menu **New File** command and save the project on the disc using **Save As...**

In the process of creating a project users should save changes using **Save**.

**Open** command allows users to open previously saved project.


Instead of using **File** menu you can use the icons grouped in the editing bar.

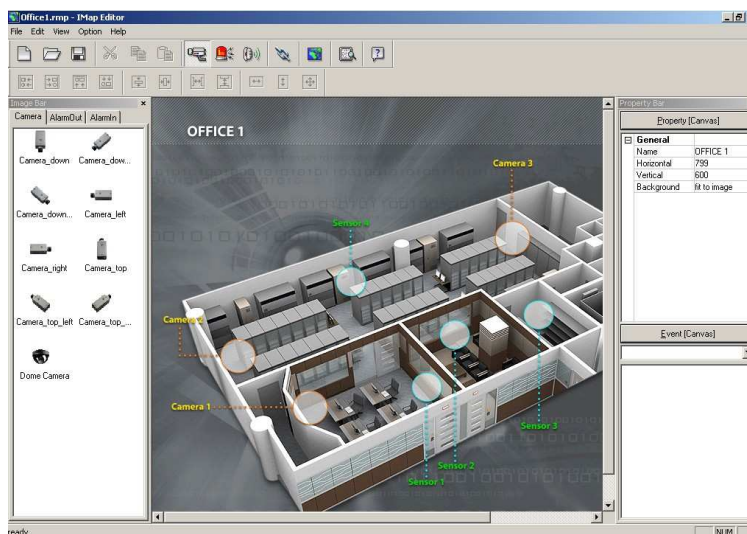
**Attention: Map projects can be saved and stored in any localization , but if you want to use them in *IMap* program you need to move the chosen maps to *IMAP* catalogue.**

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### 9.3 Background creation

Object map creating should be started with choosing and placing background, which imitates object layout. It can be any graphics created by a graphic program and saved in the form of JPEG and BMP files.

In order to place a background click  and indicate an access path to the graphic file which is used as background. After clicking **Open** graphics appears in the main editing window.



In object **Property [x x x x x]** menu users can define background parameters:

**Name** - name of a given map, which is displayed on the top of program window

**Horizontal** - background width in pixels

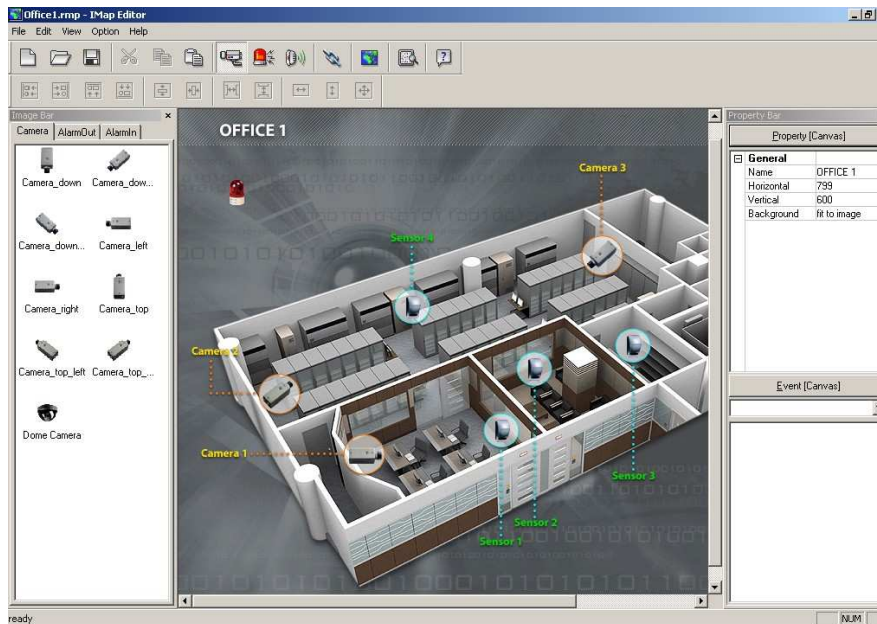
**Vertical** - background height in pixels

**Background** - background position in the program window

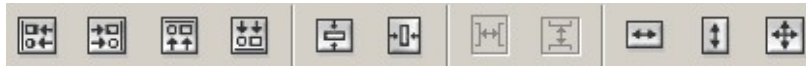
## I-MAP SOFTWARE OPERATION

### 9.4 System Elements Definition

After you have inserted map backgrounds you need to move the system element icons. In order to do that choose *Image Bar* menu and using “click and drag” method place any number of elements in the background. The elements are grouped in three tabs. The first tab contains camera icons, the second alarm output elements, the third alarm input elements.



In the process of placing the elements on the screen aligning, size unification and regular icon layout options, grouped in the tool bar, can be helpful.



After placing element icons their parameters need to be defined. In order to do that click on each icon and in *Property* menu define the following parameters:

**General** - icon display parameters etc.

**Name** - name of a given element displayed in the executable program window

**Description** - additional element description

**Branch information** - DVR's pre-defined parameters, to which a given element is connected, grouped in the *Equipment* part.

If a DVR has been predefined it needs to be chosen from the list, some other parameters are completed automatically. Choosing *Custom...* allows users to define each parameter manually.

The description of DVR's parameter predefining procedure can be found in the follow-up part of this chapter.

**Ratio** - icon size ratio, users can make icons bigger and smaller

**X, Y Coordinates** - allow users to place icons in the required place on the map more precisely than by means of a mouse.

## I-MAP SOFTWARE OPERATION

In the *Equipment* part users can set parameters concerning virtual connection of an element in a program with real devices in the system.

*User* - user name

*Password* - user password

*Admin Port* - port number, control commands and messages are sent by means of this port

*Watch Port* - port number, video images are sent by means of this port

*Device Num* - system element real number, e.g. video input number

*DVRDNS* - starting connection function by means of a domain server

In the *Event* menu users can define element behaviour during different events.

You can choose from the following events:

*Click* - clicking on element icon

*Motion event* - motion detection on the input connected with a given icon

*Video loss* - video signal loss on the input connected with a given icon

*Alarm in event* - alarm input stimulation connected with a given icon

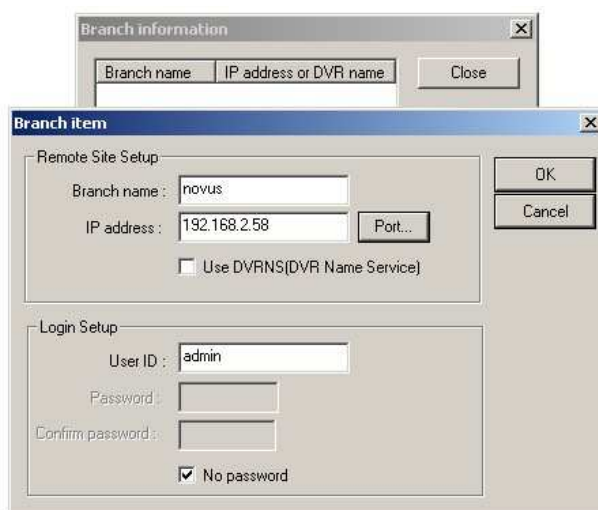
You can choose the following ways of program behaviour after a given event has taken place:

*Watch view popup* - displaying of image window from a camera connected with the element

*Switch on/off* - switching a given alarm output on/off

When you tick a given behaviour it means that it is put into action. When it is not ticked it means that the system ignores an event.

In order not to type all the data every time you define system parameters you can predefine some information. In order to do that go to *Option / Branch Information Setting...* menu and create new DVR's settings clicking *Add*.



## I-MAP SOFTWARE OPERATION

In the open window you need to define the following parameters:

**Branch name** - any name, the one referring to DVR is the best

**IP Address** - DVR's IP address

**Port...** - communication ports

**Use DVRDNS** - the use of a domain name server

**User ID** - user name

**Password** - user password

**Confirm password** - password confirmation

**No password** - logging in without password

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In order to edit existing settings choose a given DVR from the list and click **Edit**.

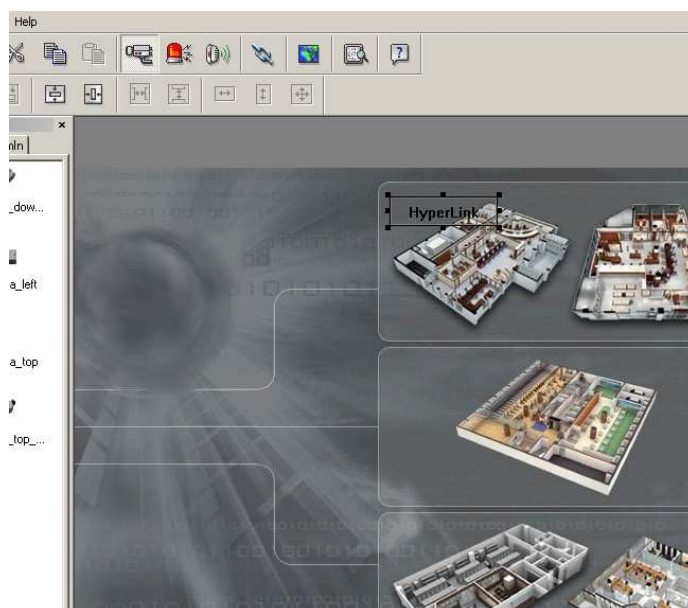
In order to remove existing settings choose a given DVR from the list and click **Remove**.

### 9.5 Sub-Map Links Defining

**IMap** program makes control of complex systems easier thanks to the possibility of creating multilevel maps. The person controlling the system can easily observe the required site in a real localization e.g. multi-storey building map. The main map allows users to choose any storey and a displayed sub-map allows users to choose any camera.

You can go back to the main map from the sub-map.

In order to create multilevel maps you need to create single sub-maps and a main map in accordance with the clues described in the previous chapters. Next create links to particular maps, e.g. in the main map plan click on  and put the link in a chosen place.



## I-MAP SOFTWARE OPERATION

Next you need to precisely define the position, size and other reference parameters.

**Name** - reference description displayed on the map,

**Image** - cursor image attached in the reference corner,

**Link Document** - sub-map file to which you are switched,

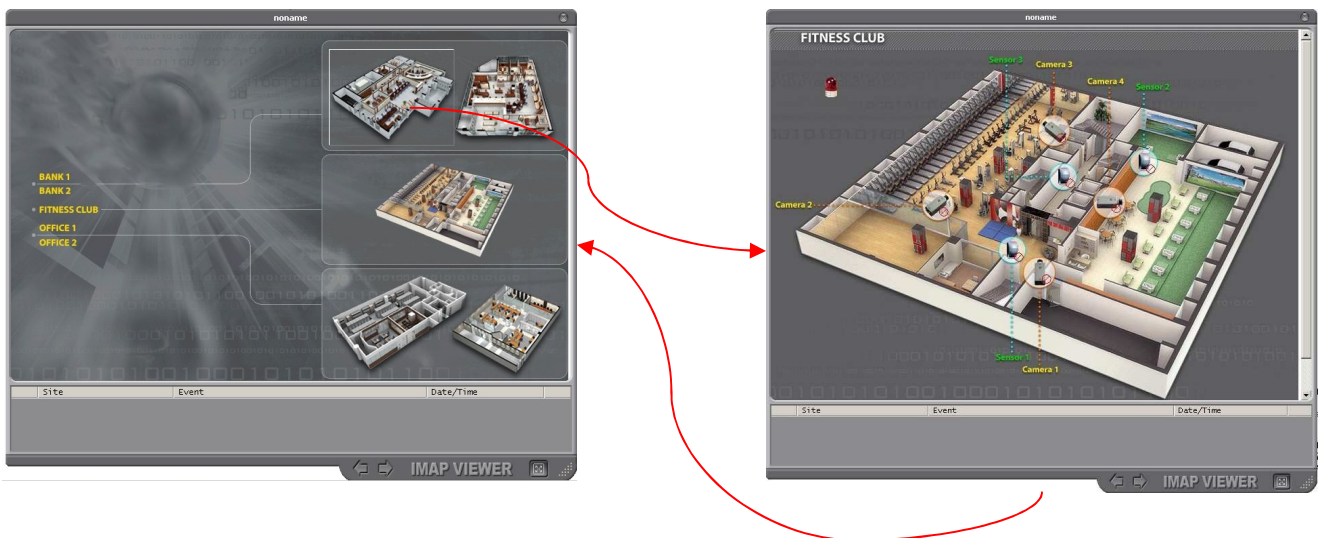
**X, Y Coordinates** - reference coordinates in the program window, allow users to place the reference in the required place on the map more precisely than by means of a mouse,

**Horizontal** - reference width in pixels,

**Vertical** - reference height in pixels,

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An example of two linked maps:



### 9.6 Feedback Connection Port Defining

If *IMap* program is to receive event notifications, users need to input port number on a map plan. By means of this port number notifications are sent. The port number has to be in accordance with the setting in the menu of a device sending the notification.

In order to set the port number go to *Option/ Callback Port Setting* menu.



## I-MAP SOFTWARE OPERATION

### 9.7 System Element Status Defining

Operators working with *IMap* software can evaluate the status of specific system elements, such as video inputs, alarm inputs and outputs, very fast.

One of the methods of illustrating system element status are the symbols appearing next to the icons. There is also another method - color change of the whole element icon e.g.



In order to run the second method you need to go to *Status Color Setting* menu and tick *Color use*.



Users can choose any events they want to be signalled:

*Unplug* - element is not defined (plugged)

*Switch off* - element status is not checked by DVR's system

*Irregular* - element does not work in accordance with set parameters

*Video Loss* - video signal loss from a given camera

*Motion* - motion detection in the sight field of a given camera

*Alarm In* - alarm detection on alarm input

*Alarm Out* - alarm output trigger

### 9.8 Displayed Site Name Defining

Site name display in the form of an IP address e.g. 83.12.234.2 is not clear. IP addresses can be given operator-friendly names.

The names are defined in the *Name Table* menu.

All defined IP addresses are listed in the window. Next to the addresses there are editing fields where you can type any name.

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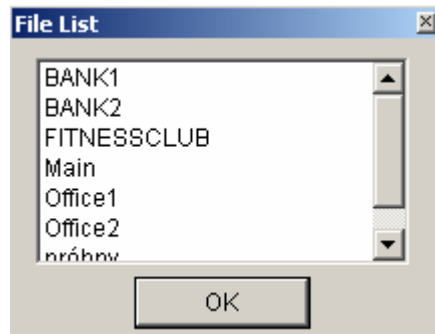
### 10. MAPS USING - MODULE *I-Map*

#### 10.1 Software Installation

In order to start *IMap* module click on



The list of all available maps appears on the screen



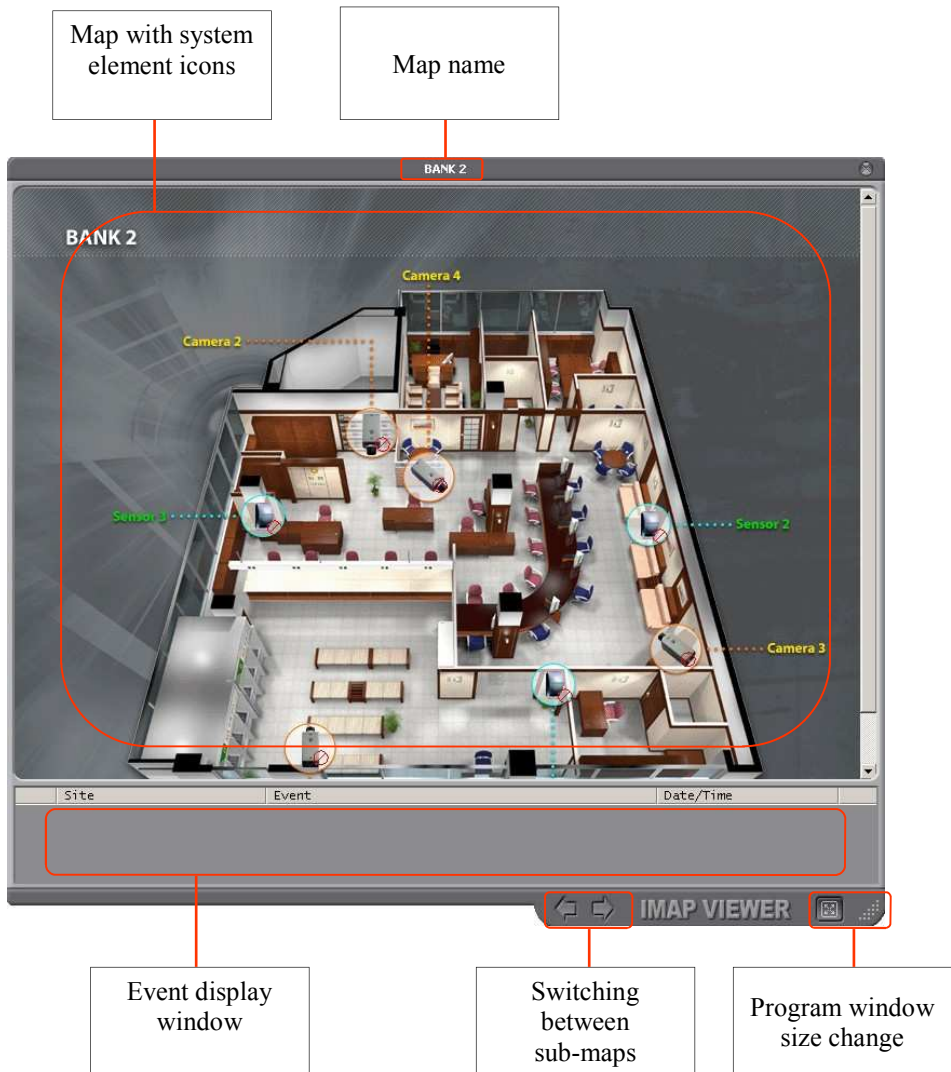
After choosing one of them and clicking **OK** user interface is started and the chosen map is displayed. In case of working with multilevel maps it is advised to start the main map as the first one and by means of references go to sub-maps.



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## I-MAP SOFTWARE OPERATION

### 10.2 Program Window Description



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## I-MAP SOFTWARE OPERATION

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### 10.3 System Element Status Description

Operator working with IMap software can assess very quickly the status of particular system elements such as video inputs, alarm inputs and outputs.

One of the methods of illustrating system element status are the symbols appearing next to the icons. Their meaning is as follows:

-  : The element is not defined in DVR's menu
-  : The element is not active
-  : The element works in an unstable way
-  : Video signal loss from a given camera
-  : Motion has been detected
-  : Alarm input is active
-  : Alarm output is active

Additionally when you point a cursor at a given element you can obtain more information about the element:

**Name:** - name attributed to the element

**IP Address:** - IP address or DVR's domain to which the element is connected

**Device Num.:** - element number

**State:** - status

Element status can be described in the following way:

**Unplug** - element is not defined

**Normal** - element operates correctly, no motion ,no alarm detected etc.

**Disable** - status is not active

**Detect** - alarm input is active

**Motion detect** - motion has been detected

**Warning** - alarm output is active

**System check not used** - System Check is disable

**Video loss** - video loss event detected

## I-MAP SOFTWARE OPERATION

The second method of illustrating system element status is changing colors of element icons. Depending on settings defined during map creating, element icons can be of different colors depending on an event e.g.:

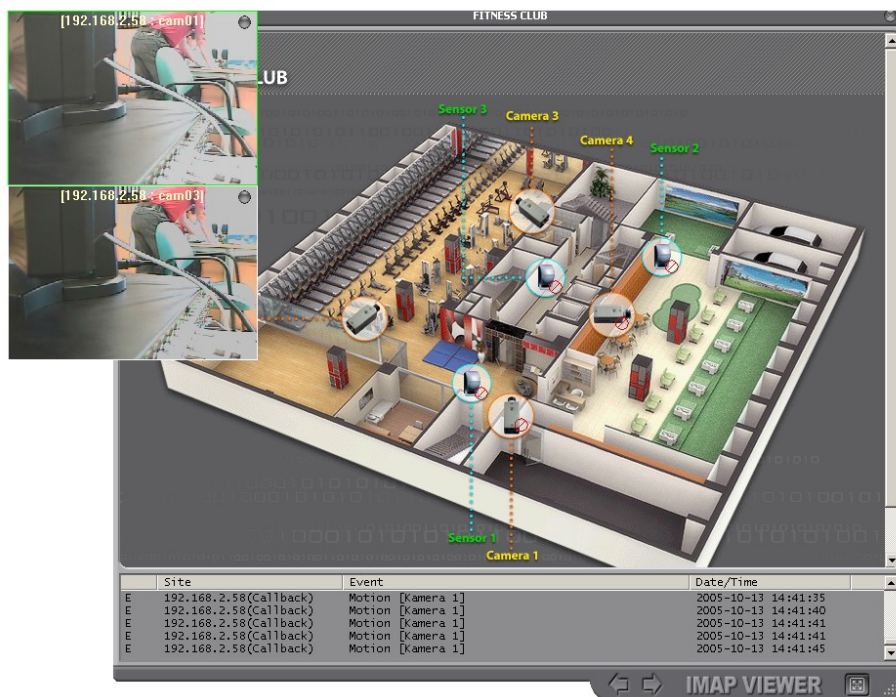


The description of color signalling settings can be found in the chapter describing map creating *IMap Editor*.

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### 10.4 Displaying and Managing of Camera Windows

Camera images are displayed in the form of windows. The windows are displayed in turn starting from the top left corner.



If two monitors work at the same time it is possible to display camera images on the left monitor, whereas the main window of *IMap* program is displayed on the right.

During one-monitor mode work camera images cover the main window in greater or lesser degree. Camera images can be displayed by clicking on the camera window, some other element or automatically after an event has been detected. Display settings should be defined by creating a map.

## I-MAP SOFTWARE OPERATION

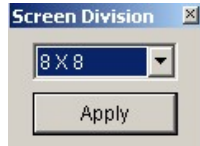
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Users can adjust the size of displayed windows.

After the image is displayed from more than one camera, right-click on it. The menu which appears allows users to adjust displaying to their own liking.



After going to *User Set* sub-menu, users can define default size of a single window. From a scroll-down menu you need to choose one out of seven options and confirm it clicking *Apply*.



2x2 split - default window size is set at about 512x350 pixels.

8x8 split - default window size is set at about 120x90 pixels.

The other settings create windows whose size is somewhere in between.

Additionally, users can temporarily change the size of particular windows. After right-clicking on a given window choose one ratio out of eight. The ratio concerns the window size in relation to the default size.

x 0.25 gives a window which is 16 times smaller

x 2 gives a window which is 4 times smaller

x 1 gives a window of the default size

*Full Screen* gives a full-screen view

Particular windows can be mixed on the screen by clicking and holding left mouse button.

In order to close a given window click on the wheel icon which is in the top right hand corner.

## I-MAP SOFTWARE OPERATION

Highlighting *Transparency* (from the same roll-down menu) the user can adjust window transparency to camera images.

It enables to simultaneously follow the camera image and working with some other application e.g. following icons on the map “covered” by a camera image.



The changes are done by using the slider and clicking *Apply*.

The slider on the very right corresponds to a total transparency, on the very left it totally covers the object underneath.

Setting the level of transparency is temporary. After closing the window with an image and restarting it, the windows are set as nontransparent by default.

You need to set all windows with images separately.

A separate setting for transparency takes effect for the main program window. In order to change a degree of transparency of the main window you need to right click on the bar of an opened IMap program (on the Window program bar).

The roll-down menu contains the following instruction:

*Transparency...* that acts in the same way as the one described above.

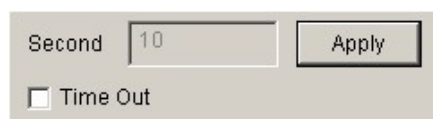


There are three more parameters connected with displaying in the menu described above:

- *Always On Top prevents* other windows from “being covered” by other running applications
- *Resize Image*, highlighting of his option enables to increase and decrease the map size during the change of the size of the main program window.

The map is always visible as a whole. When this option is not highlighted, the map has permanent dimensions and during the change of the window size does not have to be displayed as a whole.

- *Popup Timeout* – after clicking that option the following menu



After highlighting Time it is possible to show the duration of automatically started alarm window. After the time has passed the window disappears. This option does not apply to windows started manually (by clicking an icon)

## I-MAP SOFTWARE OPERATION

### 10.5 Alarm Events

At the bottom part of the window, messages about events which have taken place are displayed.

	Site	Event	Date/Time
E	192.168.2.58(Callback)	Motion [Kamera 1]	2005-10-13 15:33:48
E	192.168.2.58(Callback)	Motion [Kamera 1]	2005-10-13 15:33:49
E	192.168.2.58(Callback)	Motion [Kamera 1]	2005-10-13 15:33:49
E	192.168.2.58(Callback)	Motion [Kamera 1]	2005-10-13 15:33:50
E	192.168.2.58(Callback)	Motion [Kamera 1]	2005-10-13 15:34:26

In the first column there is information whether the event is normal (*N*) or alarm (*E*), for which feedback connection function has been established.

The second column describes DVR's IP address, where the event has taken place.

The third column describes the type of event and to which system element it refers to.

The last column describes the date and the time of an event.

### 10.6 Alarm Output Control

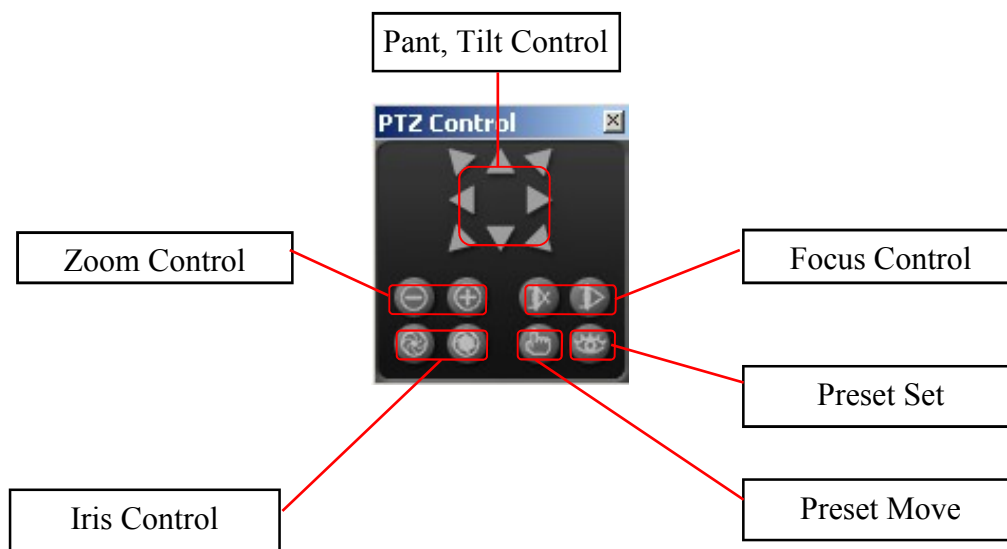
DVR's alarm outputs can be switched on after some events have been detected in the system. Additionally, from the *IMap* program level, users can switch the outputs on and off manually.

If you want to control alarm outputs you need to switch on a required function for a given element during map creating

Manual switching on and off of an output is done by clicking on an output element icon (indicator, siren etc.).

### 10.7 PTZ Control

If a RS-485 control bus is connected to a DVR there is possibility of enforcing basic PTZ functions such as: pan, tilt, zoom, focus, iris control and presets. In order to be able to control a camera you need to display PTZ menu. to do that right click on the camera image and from the displayed menu choose *PTZ Set*. The control menu appears on the screen.







## NOTES

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