AxxonSoft

ATM–Intellect

Operator's Guide

Version 1.2

Moscow 2014

axxon

Video Surveillance and Security Solutions

CONTENTS

1 Introduction

1.1 Purpose of ATM Intellect

ATM Intellect automates the actions of staff at banks and service companies involved in operation of Axxon Intellect-Enterprise based video surveillance systems. Use of ATM Intellect allows obtaining even greater results and efficiency from such video surveillance systems.

1.2 Purpose of the document

This Guide is designed for the Operators working with the *ATM-Intellect* software.

This Guide provides description of main *ATM-Intellect* software interface objects operation.

2 Control panel

2.1 Control panel interface

The Control panel is a part on ATM Monitoring interface window. This window configuration is performed on the setting panel of the **ATM Monitoring** interface object and is described in the *ATM-Intellect. Administrator's guide*.

Control panel general view is shown in figure Fig. 2.1—1.

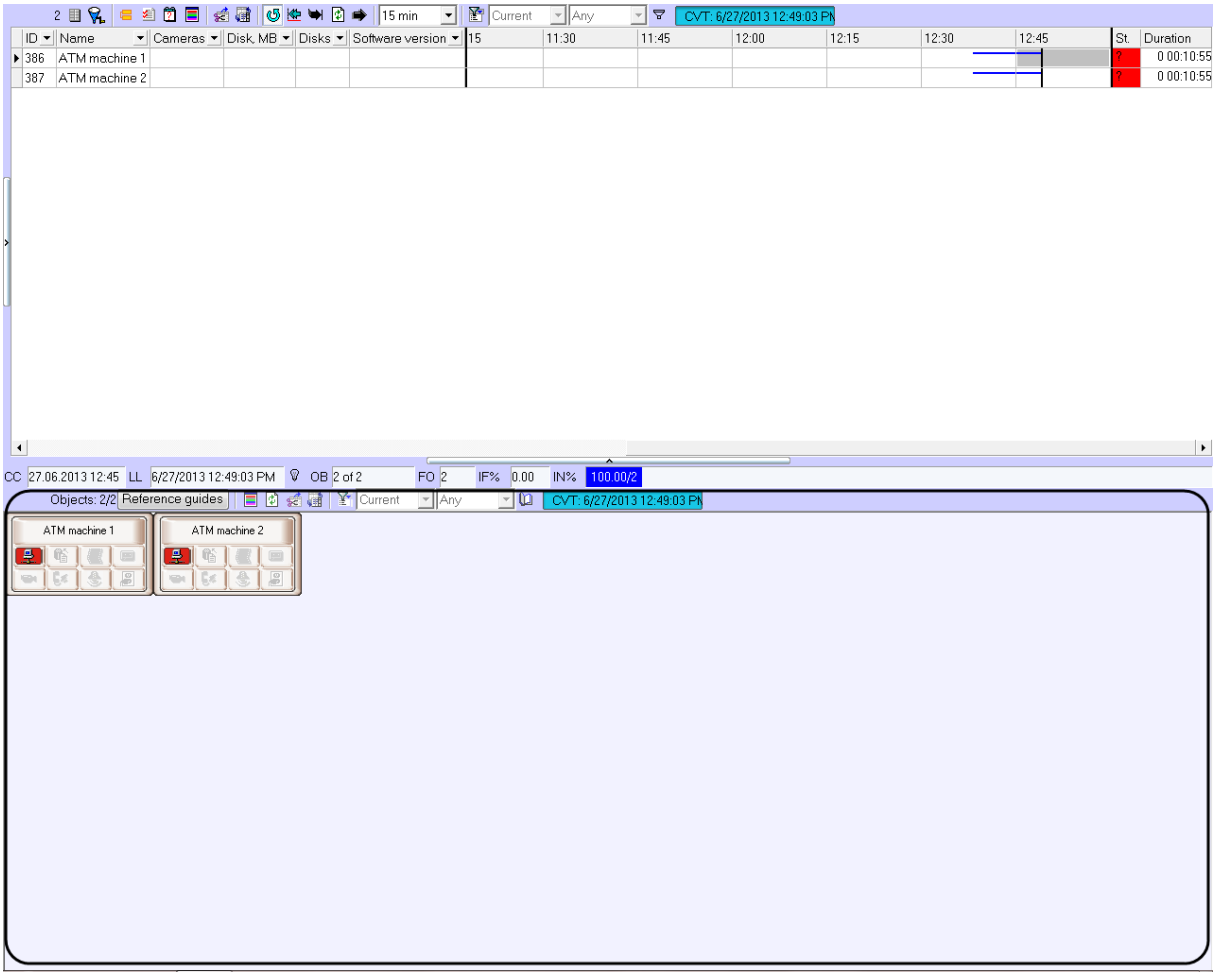


Fig. 2.1—1 Control panel

2.2 Control panel purpose

The control panel allows evaluating the current status of video surveillance components at a glance (Fig. 2.2—1).

Fig. 2.2—1 Objects on the Control panel

Each object corresponds to a rectangle that contains an object ID area (in the upper part) and a customizable number of clickable alarm indicator badges, which are grouped based on source type:

1. Communications channel
2. Device
3. Video management software

4. Storage size
5. Cameras
6. Access control systems
7. Fire and security alarms
8. Detectors
9. Thermal sensors

Depending on the configuration of the **ATM Monitoring** object in the Interfaces tab, the number of alarm groups shown can be changed to between 4 (Fig. 2.2—2) and 9 (Fig. 2.2—3).

Fig. 2.2—2 Four alarm groups

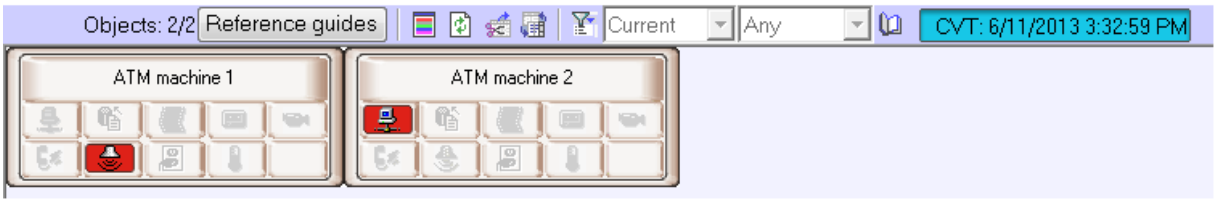


Fig. 2.2—3 Nine alarm groups

Configuring of the **ATM Monitoring** interface object is described in the *ATM-Intellect. Administrator's guide*.

For information on what an icon means, click the button ("Symbol Meanings"). A dialog box with information opens (Fig. 2.2—4).

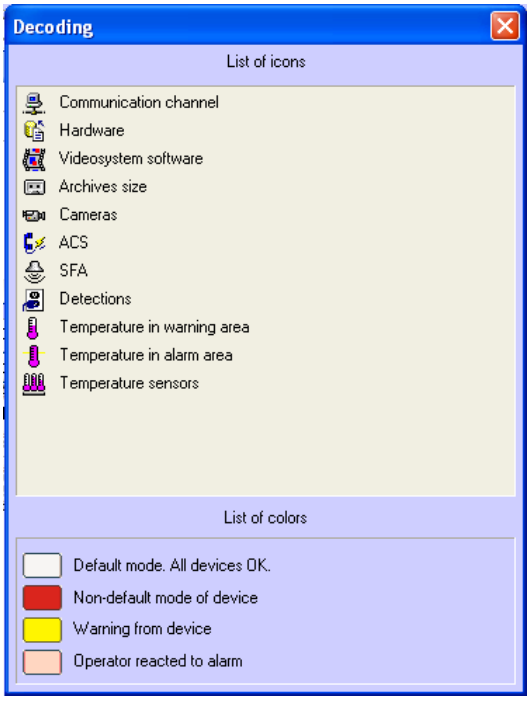


Fig. 2.2—4 Icons decoding

2.3 Changing default icons for alarm groups

If you want to change the default icons, you can assign your own icons for each alarm group. To do so, you must replace the corresponding graphics files that are provided by default. These files are in the Bmp subfolder in the Monitoring installation folder. By default, this is C:\Program Files\Intellect\VHost\Bmp. Therefore, in order to replace the icon for the Communication channel group, you must replace two files:

- Bmp\Active\01_net_active.bmp
- Bmp\InActive\01_net_inactive.bmp

Active icons measure 16x16 pixels. Inactive icons measure 17x17 pixels. Graphics files of other sizes will be rescaled to match. For active icons, use the clFuchsia color (RGB=255,0,255) as the mask for transparent areas. After replacing the graphics files, quit and start Intellect again. If one or more files are missing in the Bmp folder, or a file is in an invalid format, the default icons are used.

2.4 Current View Time

Information on the control panel is updated every time data is loaded from the database. The time of the most recent update (CVT) is shown in the upper-right corner of the window (Fig. 2.4—1).

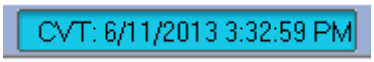


Fig. 2.4—1 Current view time

Data is loaded from the database with different periods for particular alarm types – see Appendix 1. Data update periods summary.

To get the most recent information, you can click the button ("Refresh data"). This forces an update of the data. Any new data is then displayed.

2.5 Ignoring objects

Objects (i.e. their corresponding objects in the software) that do not currently require monitoring can be put in the "ignore list". These can include objects that are in the system but have not been made operational yet or are under maintenance.

Objects in the ignore list are not visualized on the control panel or the Log panel. These objects are ignored in system reports.

To add an object to the ignore list, hold the Shift key and left-click one or more objects. The objects are outlined in dark blue (Fig. 2.5—1).

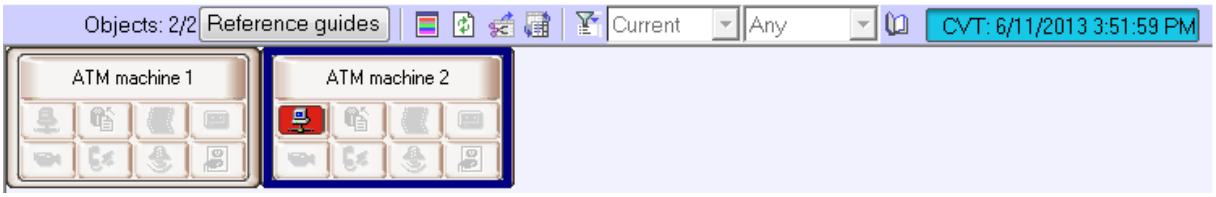


Fig. 2.5—1 Selected objects

Then click the button ("Ignore/Analyze").

To view the ignore list, click the button ("Show ignored objects"). To remove objects from the ignore list, use the same technique.

2.6 Processing alarms

2.6.1 Accepting an alarm

Alarm indicator badges both indicate information and allow performing actions.

1. Information: If an alarm occurs, the badge becomes red; if confirmed by the operator, it becomes pink, and when the alarm ends, the badge becomes inactive again.

2. Actions: The operator can click the badge to get details on the device or event.

If a camera at an object becomes inoperative, the indicator badge for the Cameras alarm group becomes red (Fig. 2.6—1).

Fig. 2.6—1 Alarm indication for the Camera alarm group

To get detailed information about an alarm, click the corresponding graphic indicator. The **Reaction to alarm** window opens (Fig. 2.6—2).

The title bar of the window contains the name of the object and its ID number. The **Alarm type** field contains the name of the alarm situation. The **Device** field details the device or event.

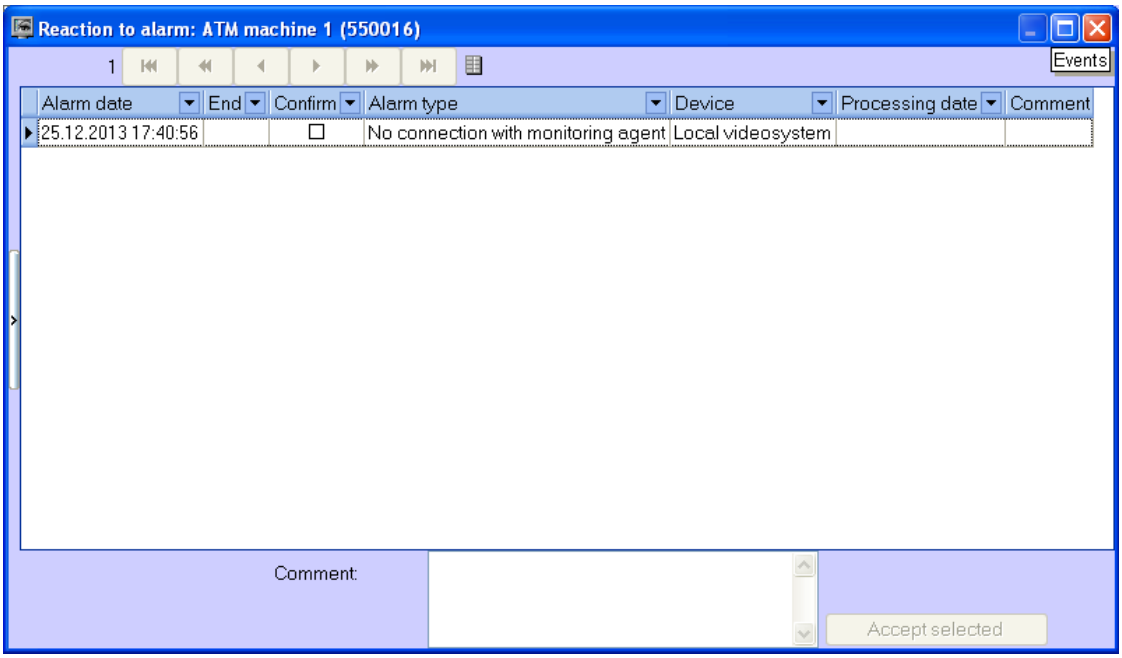


Fig. 2.6—2 Reaction to alarm

In the **Alarm date** field there is the time when *ATM-Intellect Workstation* (*ATM-Intellect Workstation TC*) had recorded the alarm from *ATM-Intellect Pro* into the database. This is not the time when the alarm appeared on the *ATM-Intellect Pro*. More info see on data transmission as given in section *Appendix 1. Data update periods summary*

If you select the **Confirm** check box in the **Reaction to alarm** window, the background of the indicator on the control panel changes from red to orange (Fig. 2.6—3) and a value is automatically added to the **Processing date** column.

Fig. 2.6—3 Accepted alarm

The time is not the current system time on the computer, but the current display time (see *Current View Time*) stored in the database. This behavior ensures that operators cannot "reverse" time and confirm an alarm at a fictitious time.

If the **Non-empty Comment field** option is enabled in the settings of the **ATM Monitoring** object, an alarm situation is not closed until the operator leaves a comment on the alarm situation and/or the operator's actions. The alarm is automatically closed if the alarm cause goes away, such as if the connection was disrupted and then restored.

If there are many alarms, the Alarm Reaction displays only up to 1,000. To view the remaining events, use the navigation buttons in the upper-right corner (Fig. 2.6—4).

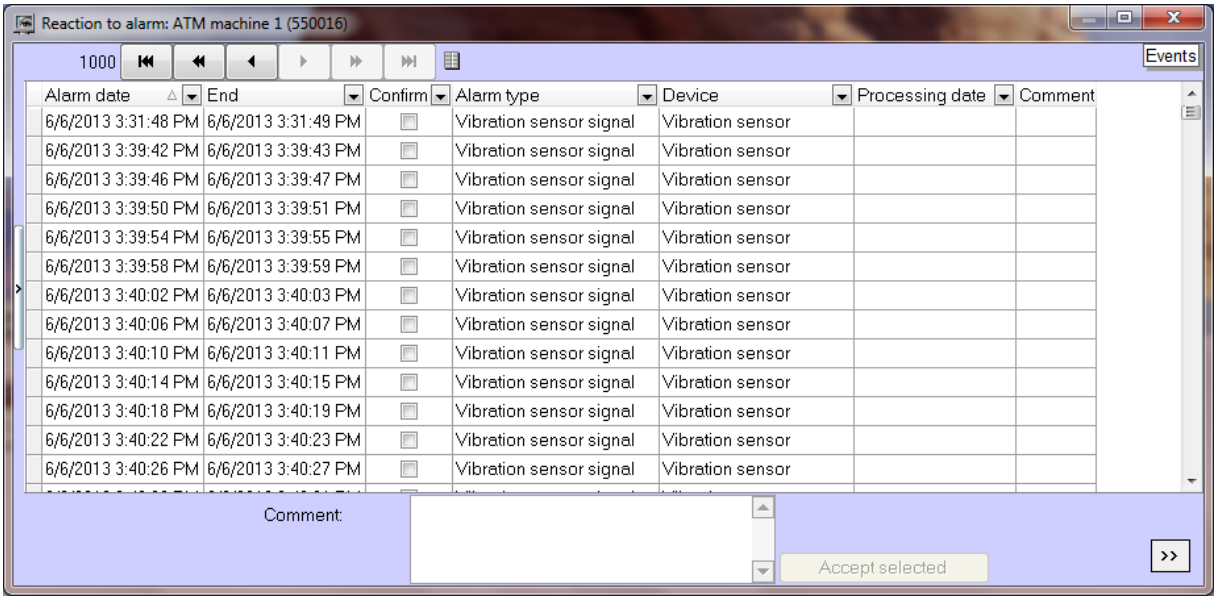


Fig. 2.6—4 Navigation butons

2.6.2 Accepting several similar alarms

To receive several similar alarms simultaneously, do the following:

1. Click the corresponding graphic indicator. The **Reaction to alarm** window opens (Fig. 2.6—5).

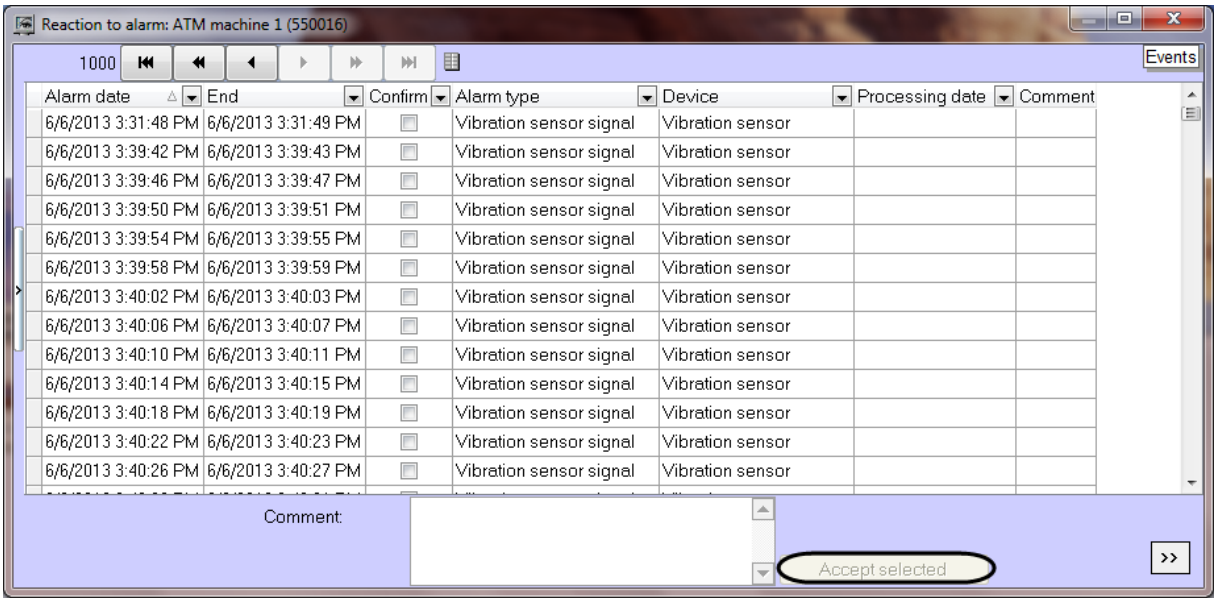


Fig. 2.6—5 Accepting several alarms

2. Select several alarms from the list in one of the following ways:

   2.1. Select certain alarms by clicking the left mouse button and “Ctrl” or “Shift” buttons.

   2.2. Select all alarms by right-clicking on the list and in the opened menu click the **Select all** option (Fig. 2.6—6).

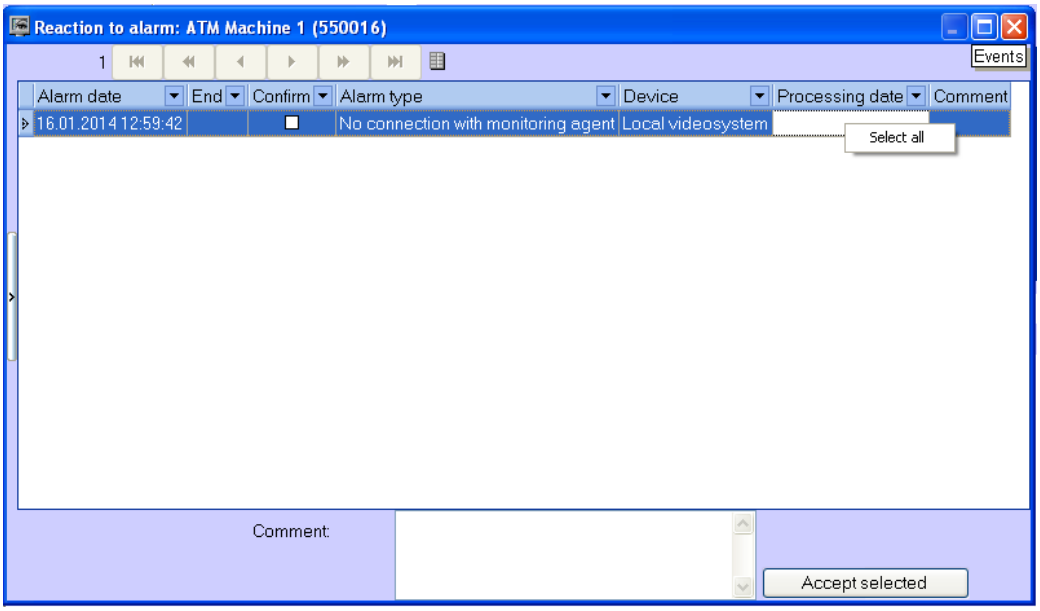


Fig. 2.6—6 Select all item

3. Fill in the **Comment** field if it is required
4. Click the **Accept selected** button

*Note. If comment is required but the **Comment** field is empty, the **Accept selected** button is inactive.*

Accepting several alarms is completed.

2.6.3 Additional information on alarms

For more information on current alarms for an object, left-click the object name (Fig. 2.6—7).

Fig. 2.6—7 Object name

The **Error decoding** window opens (Fig. 2.6—8).

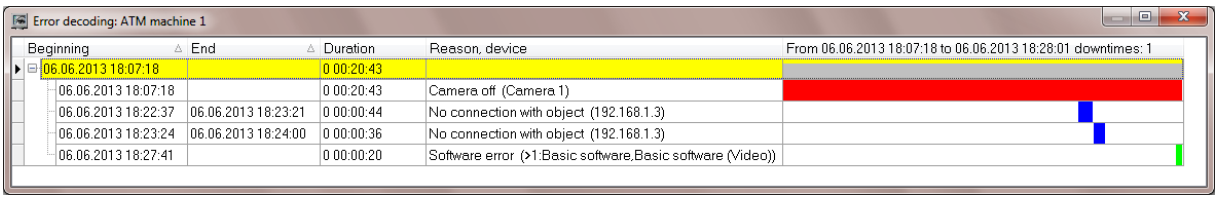


Fig. 2.6—8 Error decoding window

Alarms that occur for different reasons can overlap and form overall alarm periods at the object. They are shown in the table in gray. If the alarm is still ongoing, the **End** column is empty.

If there are many alarms, the **Error decoding** window displays up to 200 alarm situations. To view the remaining events, use the navigation elements and **View events after** option in the lower-right corner.

2.6.4 Types of alarms

The table (Tab. 2.6—1) lists all types of alarms that are registered by the monitoring system by default. For the **Communication channel** alarm group, if *ATM Intellect Pro* connects to *ATM Intellect Workstation* over TCP/IP and has connected at least once, the **Device** field displays the IP address of the object. For *ATM Intellect Workstation TC* in this case, the IP address of *ATM Intellect Workstation* is displayed.

Tab. 2.6—1 Alarm types

Alarm group	Alarm type	Device	Comments
Communication channel	No connection with object	Communication channel	ATM Intellect Pro connects to ATM Intellect Workstation in client mode.
	No connection with monitoring agent	Local video system	ATM Intellect Pro connects to ATM Intellect Workstation in server mode
Device	Disk failure	101: Disk name	The Intellect settings specify the disks to which the video archive is written. This alarm occurs when one of these disks does not exist or has an invalid type. Valid disk types include internal and external disks, removable disks, and network disks.
		102: Disk size	Error calculating free disk space
		103: VIDEO folder	No VIDEO folder
		104: Number of disks=0	There are no disks selected in the Intellect settings for video archive recording.
		105: Disk error	An unknown disk error from ATM Intellect Pro.
	UPS signal	1000: PowerChute started 1001: PowerChute stopped 1002: Connection restored 1003: Power restored 1004: Self-test passed 1005: Administrative shutdown 1006: Shutdown cancelled 1007: Battery discharged 1009: Battery replaced 1013: Allowable restart 1014: RTC started 1015: RTC finished	

Alarm group	Alarm type	Device	Comments
		1016: Shutdown in progress 1102: Normal temperature 2000: Power turned off 2001: Shutdown completed 2002: Low power 2003: Low battery 2004: RTC aborted 2007: High power 3000: Connection lost 3001: Restart 3002: Self-test failed 3003: Battery discharged 3004: Battery connection lost 3016: Replace battery 3107: High temperature	
Video system software	Software error	Basic software	intellect.exe process terminated
		Basic software (Video)	video.run process terminated or frozen
		Registry	Registry does not have data required for ATM Intellect Pro to function
		Database	Error connecting to Intellect database
Archive size	Archive size too small	Archive 1 … Archive 32	Storage capacity requirements are not met for camera number 1 ... 32. If there are more than 32 cameras at the object, create an additional Surveillance Object in ATM Intellect Pro.
Cameras	Camera off	Camera 1 … Camera 32	Camera number 1 ... 32 is not working. If there are more than 32 cameras at the object, create an additional Surveillance Object in ATM Intellect Pro.
Fire and security alarms	Vibration sensor signal	Vibration sensor	Four sensors (relays), whose names cannot be changed in ATM Intellect Pro: they should be used in accordance with their names ("Vibration Sensor", "Lock", etc.)
	Signal from sensor Lock	Lock	
	Signal from overheat sensor	Overheat sensor	
	Signal from additional sensor	Additional sensor	
	Signal from additional sensor	EXP. SENSOR. SENSOR	12 sensors (relays), whose names can and should be customized in ATM Intellect Pro, since this name is displayed in the Device

Alarm group	Alarm type	Device	Comments
			column. By default, the string "EXP. SENSOR" is displayed in this column. ДАТЧИК»
	Scheduled computer restart	Computer	Windows was properly exited before computer restart.
	Unscheduled computer restart	Computer	Windows was not properly exited before the computer was restarted (power was interrupted)
Temperature sensors	Temperature sensors off	Temperature sensor set	Adapter for processing information from thermal sensors (DS2480B) is not working
	Temp.: warning	Temperature sensor set	The thermal sensor (DS18S20) is approaching the temperature alarm zone. The indicator button becomes yellow.
	Temp.: alarm	Temperature sensor set	The thermal sensor (DS18S20) is in the temperature alarm zone.

Note: Periods of information updating in the interfaces can vary for particular alarm types – see Appendix 1. Data update periods summary.

For the **Access Control** and **Detectors alarm** groups, no data is sent from *ATM Intellect Pro*.

There are two types of alarms that are tracked by the monitoring system by default:

1. **Long**
2. **Short**

Long alarms have a beginning and an end: "Camera off"/"Camera on", "No connection with object"/"Connected to object".

Short alarms do not have a duration. They only inform about an event, for example, "Vibration sensor triggered" or "Scheduled computer restart", and are not included in the quality measurements for the system.

For short alarms, the **End** field is immediately filled with the time of the alarm plus one second. Confirmed short alarms are displayed on the control panel for ten minutes.

The following types of alarms are **long**:

1. No connection with object

2. No connection with monitoring agent
3. Disk failure
4. Software error
5. Archive size too small
6. Camera off
7. Thermal sensors off

2.6.5 The number of alarms displayed

The number of objects displayed on the Control Panel is determined by the current filter (Fig. 2.6—9) if it is activated by clicking the filtering button ("Enable/disable filter"). The first combo box sets the value for "Show only objects that have errors in the last..."; the second combo box sets the value "Only objects with errors lasting longer than...".

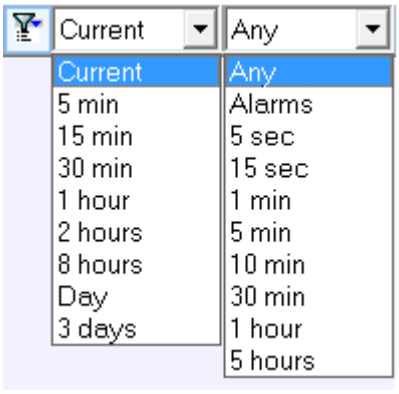


Fig. 2.6—9 Alarms filter

The upper-left corner contains information about the number of objects, out of the total number, that are displayed on the Control Panel after clicking the filtering button (Fig. 2.6—10).

Fig. 2.6—10 Number of objects

2.7 Viewing video data on alarms

2.7.1 Indication of video data presence

In ATM-Intellect software, the alarms from sensors can be followed by video data, such as video clips and video frames.

If there are loaded but not viewed yet video data, the name of the object on the Control panel is colored in orange (Fig. 2.7—1).

Fig. 2.7—1 Indication of unviewed data

2.7.2 Viewing video data

To view all received video data, select the Video data item in the object context menu (Fig. 2.7—2).

Note. Depending on the ATM-Intellect software settings (see ATM-Intellect. Installation and configuration guide) the received video frames and video clips can be opened immediately after they are received.

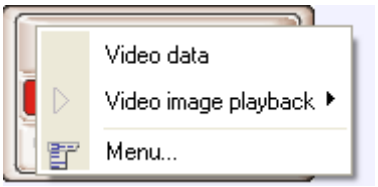


Fig. 2.7—2 Video data item

The **Video data** dialog box opens (Fig. 2.7—3) . The information on video data is displayed in this dialog box. This dialog box also provides function to cancel data downloading, if it is has not been completed yet, using he **Cancel download** button.

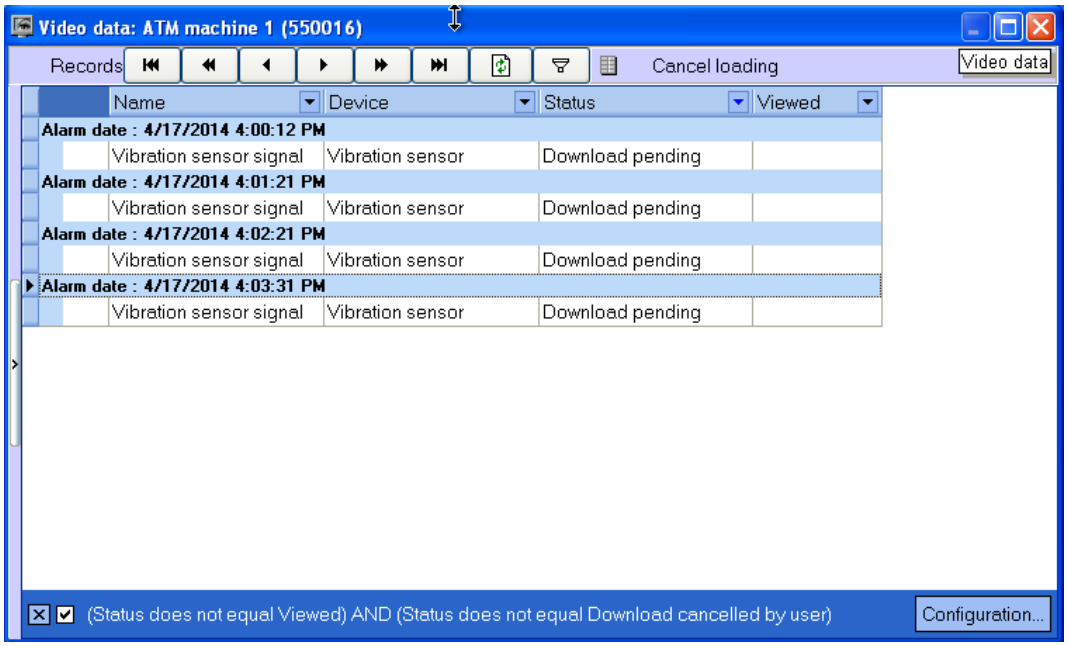


Fig. 2.7—3 Video data dialog box

To force an update of the information in the Video data dialog box, click the .

To open the loaded video data right-click in the row corresponding to required data and select the **View** item (Fig. 2.7—4). If the data download is not completed, this item is unactive.

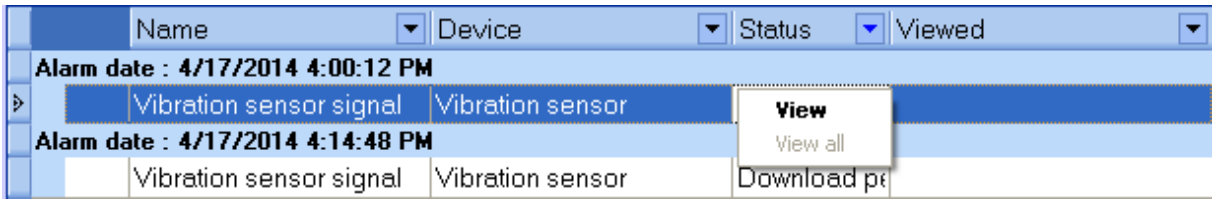


Fig. 2.7—4 View item

When the **View** item is selected, a video frame is opened with utility selected at the ATM-Intellect setup and a video clip is opened with Axxon Player utility. Video data status changes to "Data viewed" and in the Viewed column the date of viewing is displayed.

2.7.3 Video data grouping setup

By default, video data are grouped by alarm time. If necessary, it is possible to set video data grouping by other parameters. To do so, in the context menu of a column, by which one need to group the data, select **Group by field** (Fig. 2.7—5).

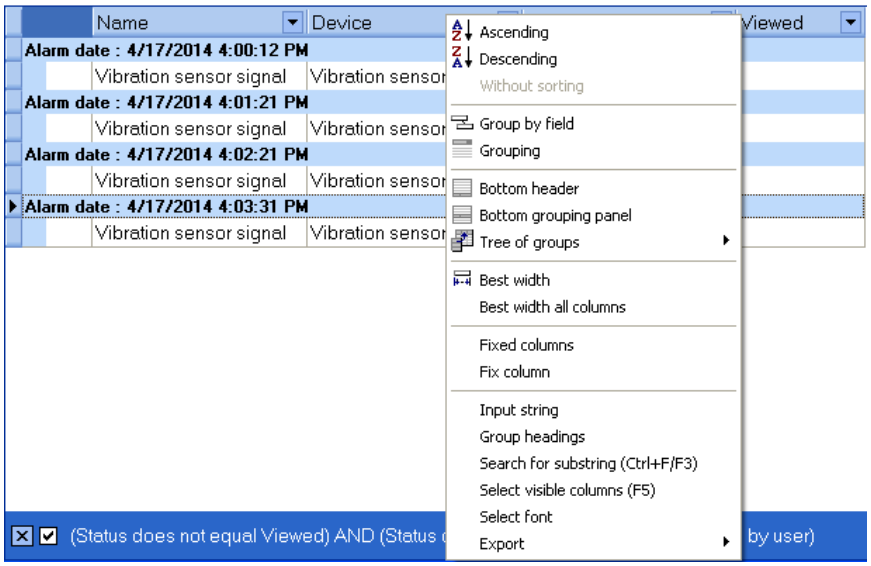


Fig. 2.7—5 Column context menu

Data will be grouped by selected field (Fig. 2.7—6). In the upper part of the dialog box the fields by which the video data are grouped are displayed - a grouping area. To view this area one can also select the **Grouping** item in a column context menu.

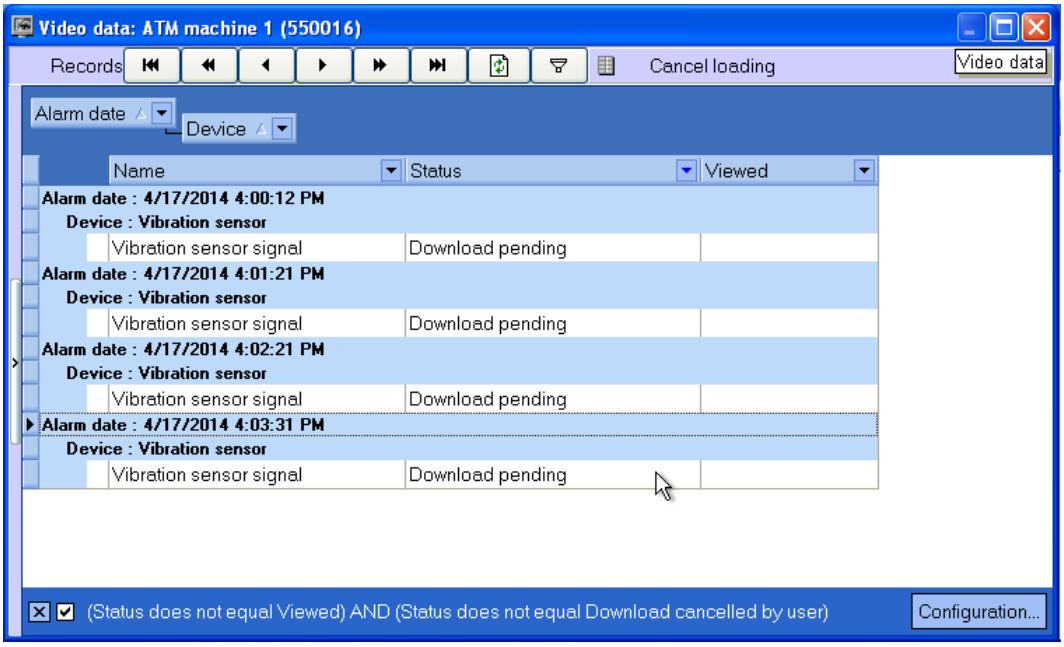


Fig. 2.7—6 Grouping by several fields and the grouping area

To cancel grouping by a field, right-click on it and select **Remove from grouping** (Fig. 2.7—7).

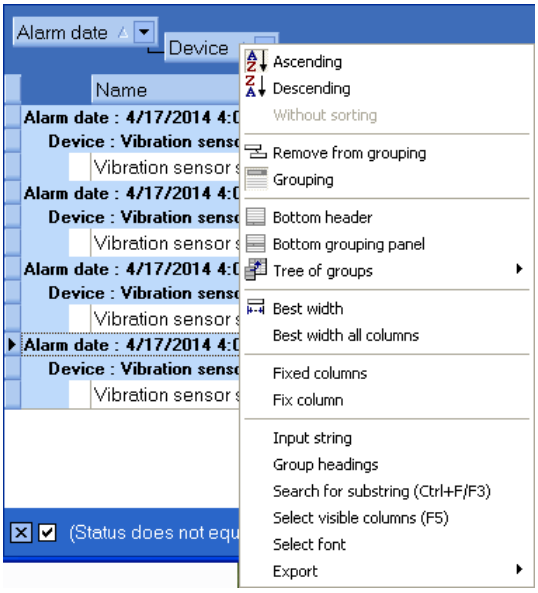


Fig. 2.7—7 Remove from grouping item

2.7.4 Setting video data list filter

By default, in the **Video data** dialog box the data are not displayed, which has been viewed or for which downloading has been canceled by a user. To display all the video data, unset the checkbox in the lower left corner of the **Video data** window.

It is also possible o setup the filter for video data displaying. To open the filter setup dialog box, in the **Video data** dialog box click **Configuration...** or . The filter creator dialog box opens (Fig. 2.7—8).

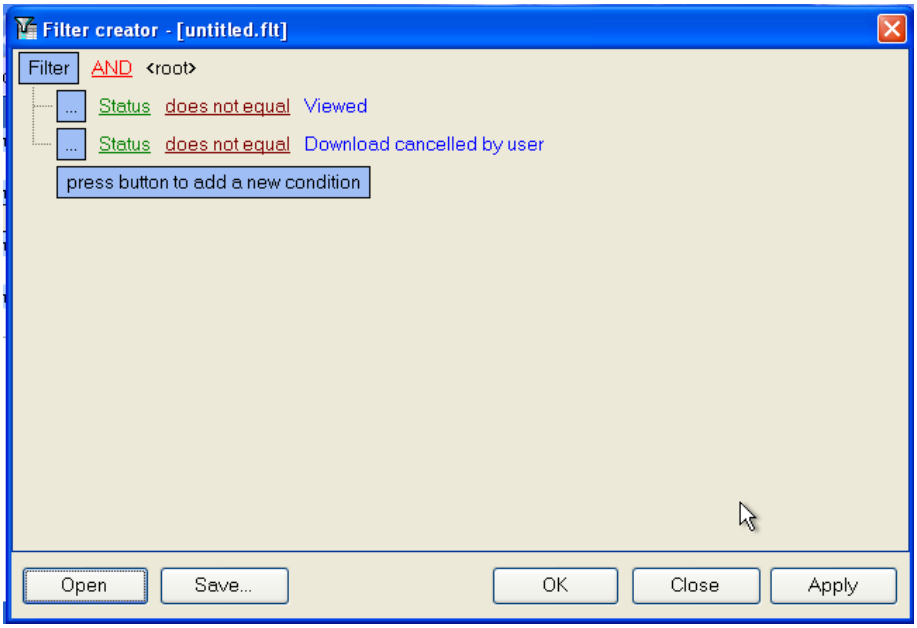


Fig. 2.7—8 Filter creator dialog box

When configuring the filter, one may need to perform the following operations:

1. Add a condition or subcondition. To add a condition click the **click to add a new condition** button or in the filter menu click the corresponding item (Fig. 2.7—9). The condition menu opens by clicking the **...** or **Filter**.

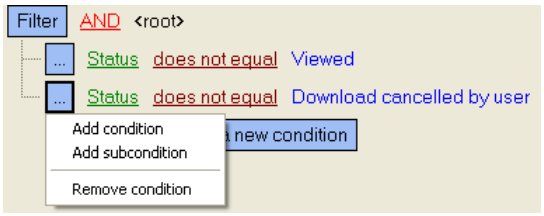


Fig. 2.7—9 Condition menu

2. Remove a condition. To remove a condition, click the corresponding item in the condition menu (Fig. 2.7—9).

3. Select a logical function for combining conditions (Fig. 2.7—10). A drop-down list for selecting the logical function opens on the left-click on the logical function.

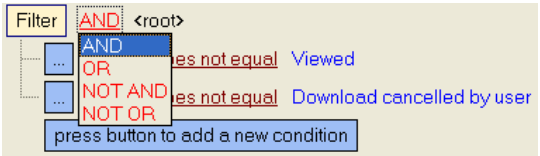


Fig. 2.7—10 Selecting a logical function

4. Select a field for comparison (Fig. 2.7—11). A drop-down list for selecting the field for comparison opens on the left-click on the field name.

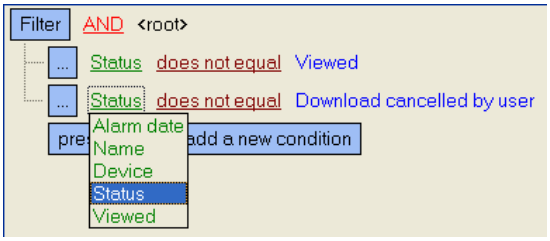


Fig. 2.7—11 Selecting a field

5. Select a method of comparing (Fig. 2.7—12). A drop-down list for selecting the method of comparing opens on the left-click on the method name.

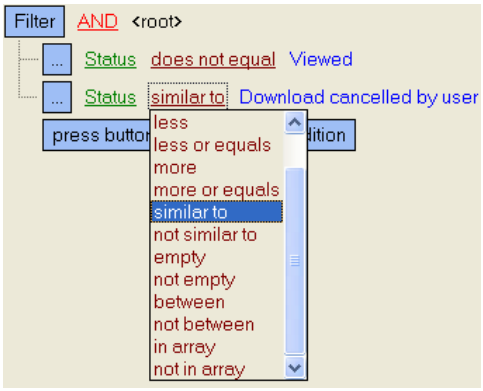


Fig. 2.7—12 Selecting a method of comparing

6. Select a value for comparing with. A way to select the value depends on the field type. For example, a date can be set using a calendar (Fig. 2.7—13), a name can be entered in a field (Fig. 2.7—14), etc.

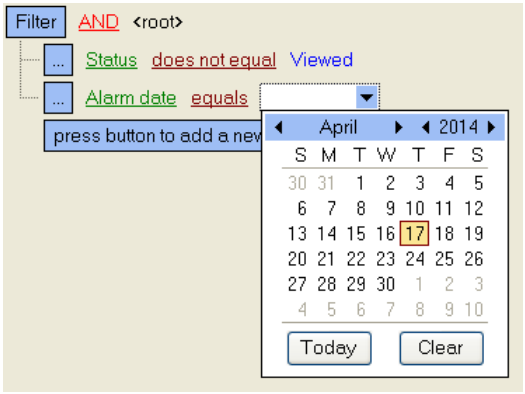


Fig. 2.7—13 Specifying a date

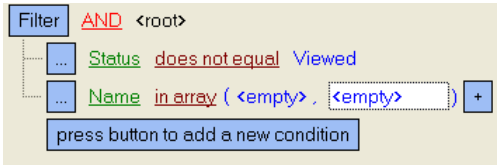


Fig. 2.7—14 Specifying an array of names

After completing settings, the filter can be saved to a file with the .flt extension by clicking the **Save...** button. This file can then be opened using the **Open** button.

2.8 Event log

To view all events recorded in ATM Intellect, click the button ("Event log"). The Event log window opens (Fig. 2.8—1).

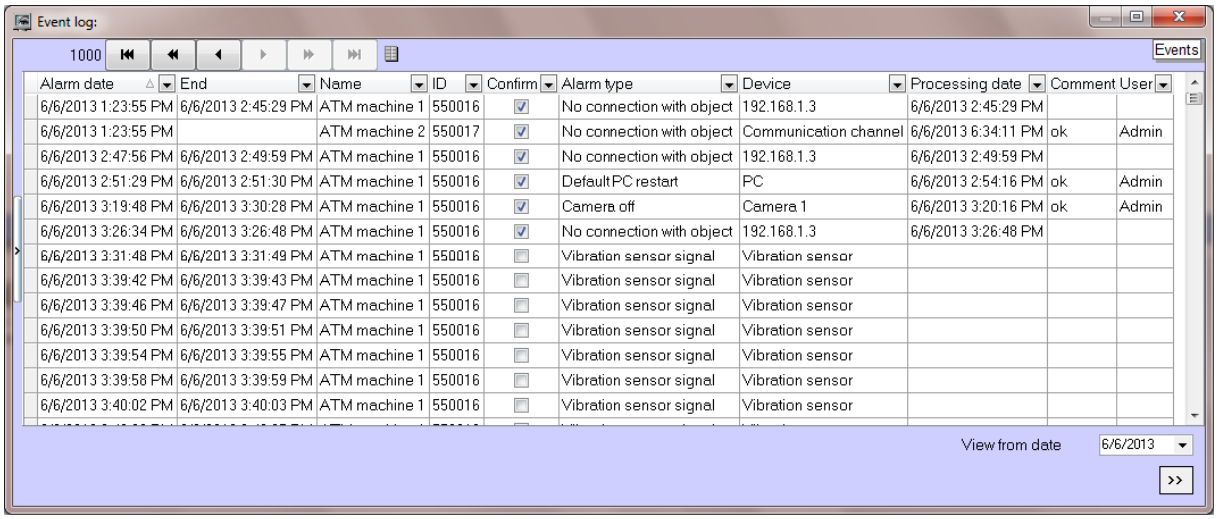


Fig. 2.8—1 Event log window

You can sort the table by any column or filter any column.

2.8.1 Viewing comments

If an operator left a multiline comment when closing an alarm, only the first line will be visible in the **Event log** window, in the **Comment** column.

To view the entire comment, left-click the corresponding cell of the table (Fig. 2.8—2).

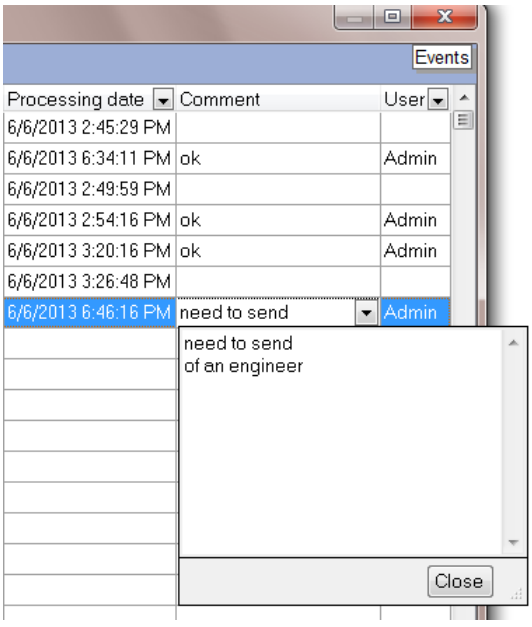


Fig. 2.8—2 Viewing a comment

2.8.2 User who accepted alarm

By default, all alarms accepted by the operator are recorded under the Admin user. If there is a user created in the *Intellect* settings panel, in the **Users** tab, who has certain rights, when the operator starts *Intellect* under this user's account all confirmed alarms will be recorded under the user's name.

2.8.3 Period of events viewong

By default, alarm situations for the current day are displayed. To view previous events, use the **View from date** option. If there are more than 1,000 events, use the navigation buttons to view them (Fig. 2.1—1).

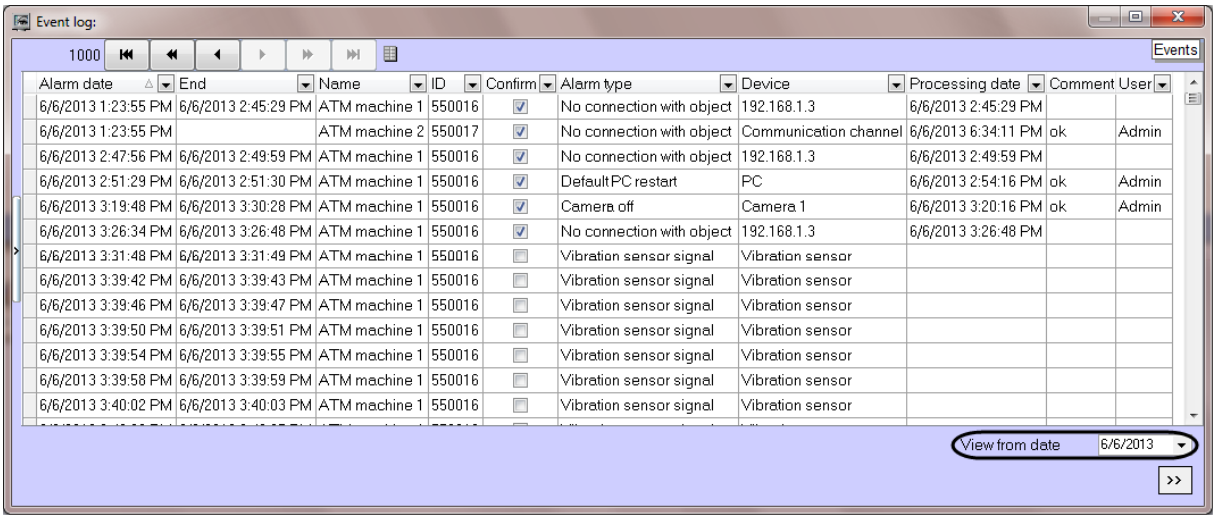


Fig. 2.8—3 View from date field

2.8.4 Event log export

To save the contents of the Event log to a file in a particular format, right-click the header of any column in the Event log window and select the corresponding item in a context menu (Fig. 2.8—4).

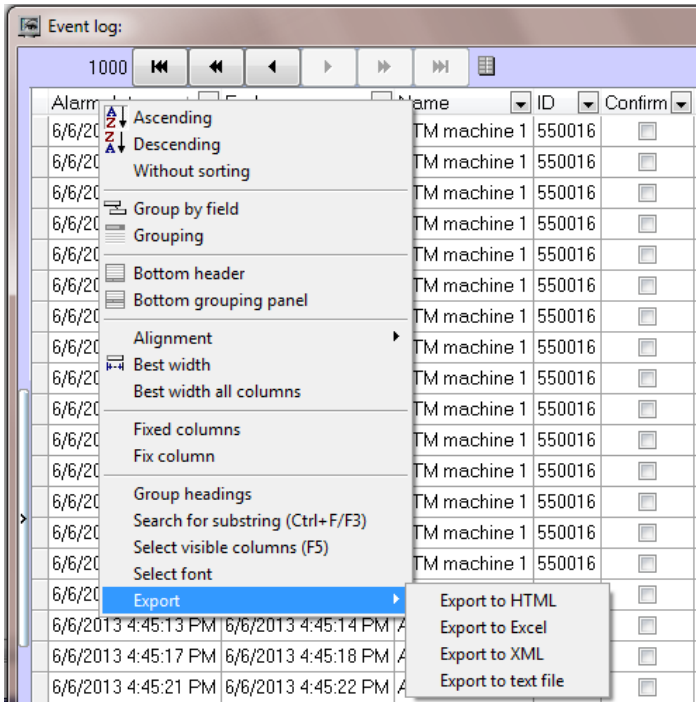


Fig. 2.8—4 Exporting Event log

2.8.5 Configuring the event log columns position

You can select the **Best width all columns** command in a context menu (Fig. 2.8—4). When chosen, this command sets the width of all columns to the minimum necessary to display the longest entry in the column.

If not all columns fit in the visible area of the **Event log** window, a scrollbar becomes available. During scrolling, some columns that should be maintained during scrolling (such as alarm date and processing date) remain visible. To fix these columns, in the context menu, select **Fix column**.

The order of columns in the **Event log** can be changed as well. To do so, left-click the header of the column that you want to move and drag it to the new location.

2.9 Reference information

2.9.1 Viewing reference information

ATM Intellect maintains reference information about all objects. To view this information, click the **Reference guides** button and select the **Monitoring objects** menu item (Fig. 2.9—1).

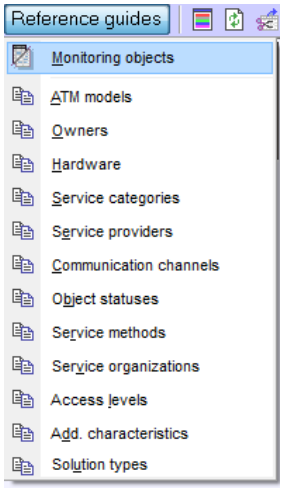


Fig. 2.9—1 Monitoring objects item

The **Monitoring objects** window opens, with a list of all objects in the system (Fig. 2.9—2).

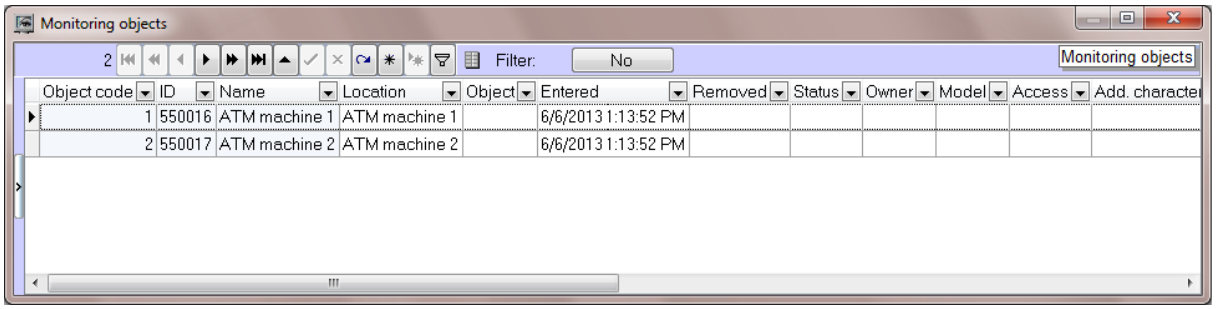


Fig. 2.9—2 Monitoring objects window

2.9.2 Editing reference information

Double-clicking an entry opens a **Record** dialog box, in which you can enter reference information for the object (Fig. 2.9—3).

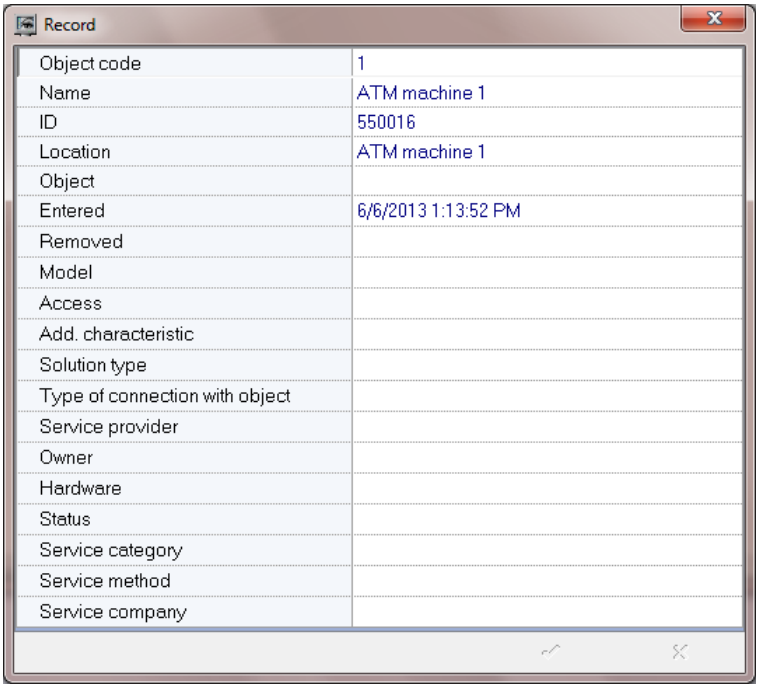


Fig. 2.9—3 Editing reference information

Values are offered for some of the fields (Fig. 2.9—4) but not for others. This means that the reference is blank (see *Filling in reference information*).

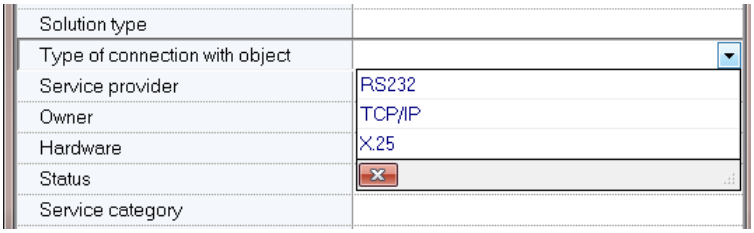


Fig. 2.9—4 Offered values

2.9.3 Filling in reference information

To fill in reference information, click the **Reference guides** button and, in the window that opens (Fig. 2.9—5), select the corresponding reference: for example, **Owners**.

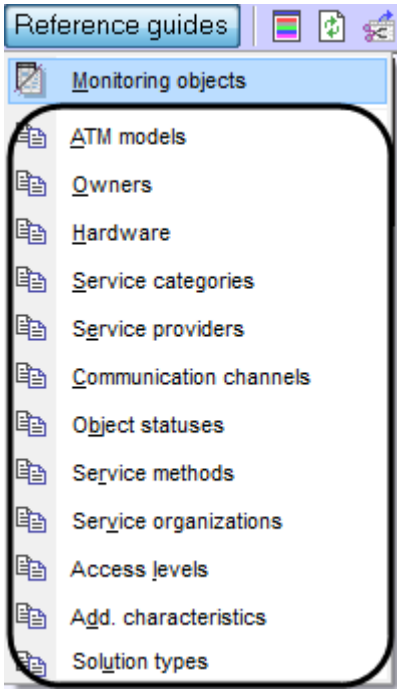


Fig. 2.9—5 Available guides

In the window to edit the guide opens (Fig. 2.9—6).

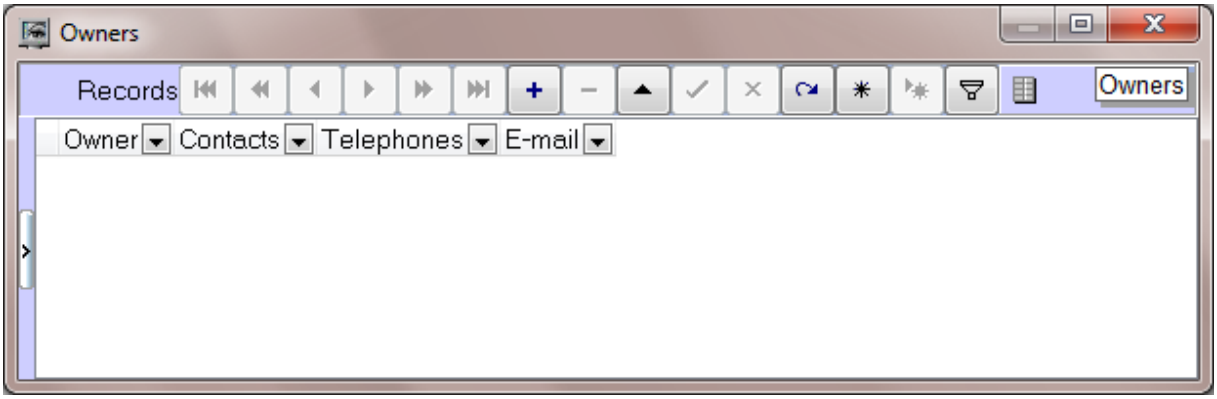


Fig. 2.9—6 The window to edit the guide

To add an entry, click the **Insert record** button and enter a value (Fig. 2.9—7). Then click the **Save** button.

Fig. 2.9—7 Adding new value into the guide

Any reference can be edited in a similar manner.

You can then fill in the corresponding field with new value (Fig. 2.9—8).

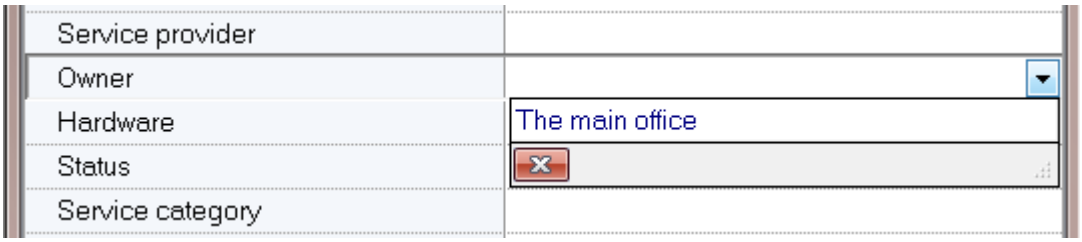


Fig. 2.9—8 Using new value

2.9.4 Column context menu in the Monitoring objects window

If you right-click the header of any column in the **Monitoring objects** window, a context menu appears (Fig. 2.9—9), which allows performing various actions similar to the ones for the Event log (see *Event log export* and *Configuring the event log columns position*).

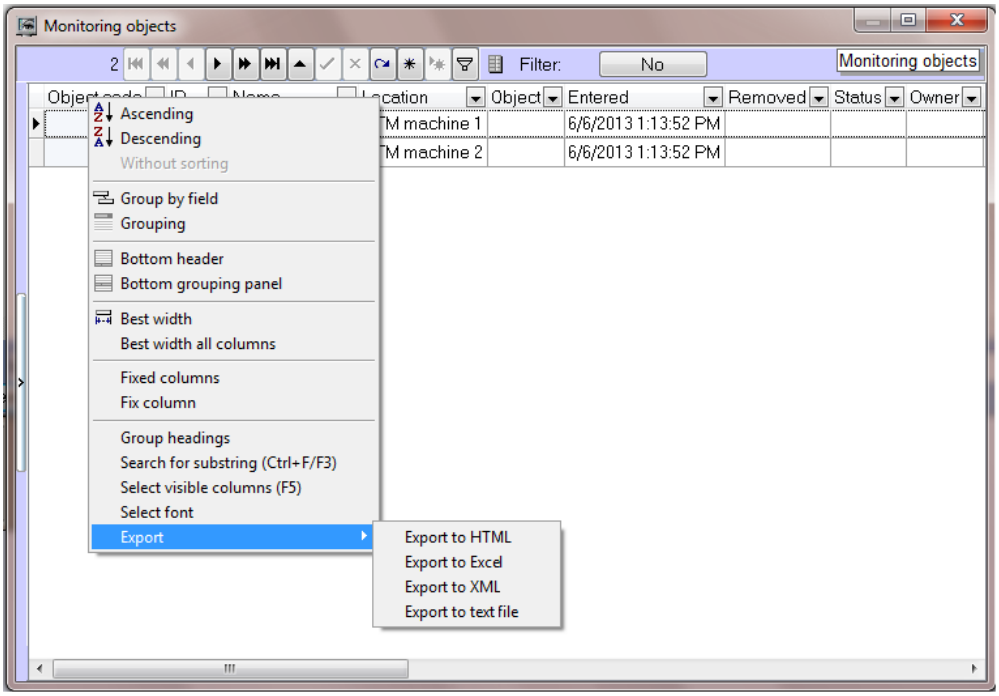


Fig. 2.9—9 Column context menu in the Monitoring objects window

2.10 Viewing live and archive video from objects

You can view live and previously recorded video from objects from the Control Panel. To do so, right-click the area with the object name. In the context menu that appears (Fig. 2.10—1), select **Video image playback** and the relevant camera.

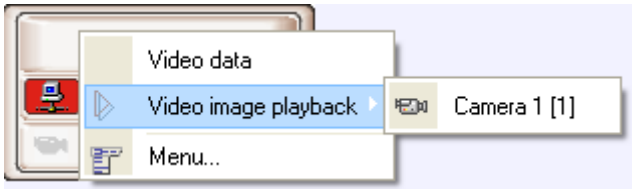


Fig. 2.10—1 Selecting camera for video playback

The number of cameras will match the number of cameras enabled in the settings for the object.

*Note. The **Video image playback** menu item is available only for objects that have connected to ATM Intellect Workstation at least once. This menu item is absent for objects that have not connected at least once and for ATM Intellect Workstation TC (Fig. 2.10—2).*

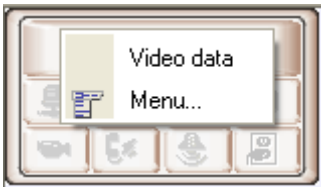


Fig. 2.10—2 The Video image playback item is absent

If the *ATM-Intellect Workstation* software have the corresponding setting, then when the camera is selected for viewing live video the warning will be displayed saying that transmission of video can create critical load on the channel (Fig. 2.10—3). If it is really necessary to view live video, click **OK** in the **Warning** dialog box. To cancel viewing live video, click **Cancel**.

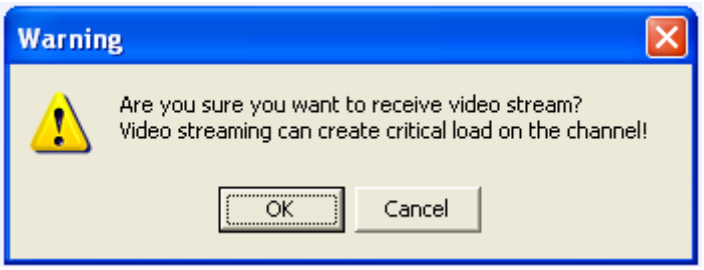


Fig. 2.10—3 Warning

After you select a camera (Fig. 2.10—1), a dialog box appears; video should appear in it after a few seconds (Fig. 2.10—4).

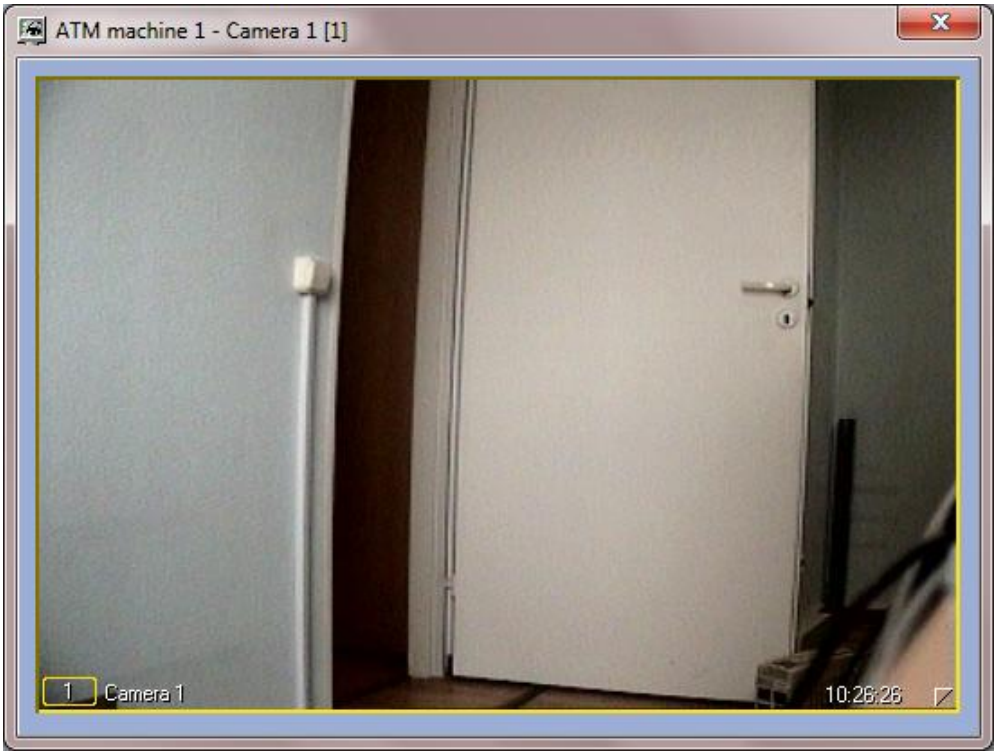


Fig. 2.10—4 Viewing live video

The title bar displays a description of the object, camera number, and camera ID in brackets.

*Note. When viewing live video, frame rate may be limited by the **ATM Monitoring** interface object settings (the **Speed of video stream** parameter) - see documents ATM Intellect. Administrator's Guide.*

Archive access is available through the method used in Intellect (Fig. 2.10—5).

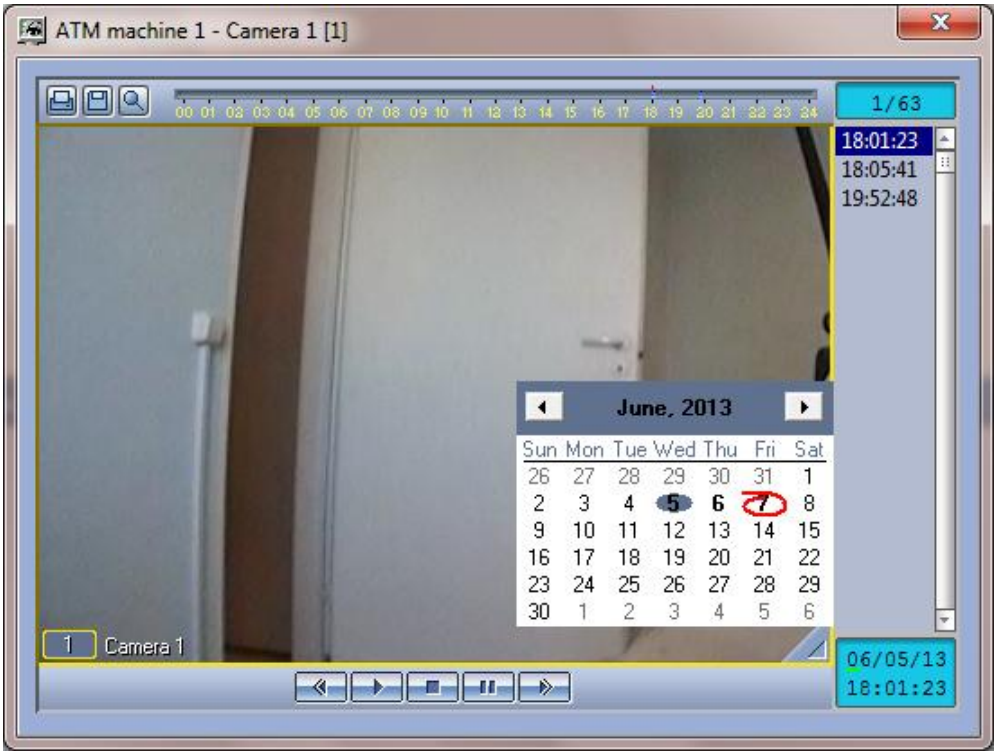


Fig. 2.10—5 Viewing archive

While viewing live video or archive from several cameras simultaneously, a separate dialog box opens for each camera.

2.11 Running external applications from the Control Panel

By using the **Menu** context menu (Fig. 2.11—1) you can start external applications from the Control Panel.

Fig. 2.11—1 Menu

You can pass an object's IP address as a parameter when starting applications in this manner.

For example, if you want to quickly ping an object, do the following:

7. Right-click the area with the object name and, in the context menu that appears, select **Menu...** (Fig. 2.11—1).

8. The **Menu...** dialog box appears. (Fig. 2.11—2).

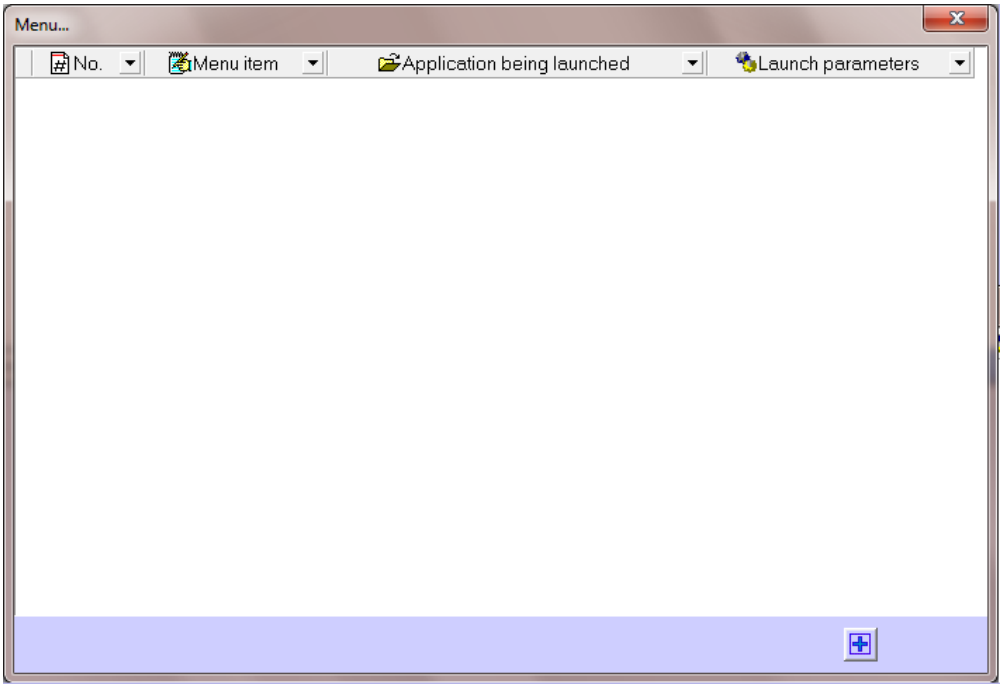


Fig. 2.11—2

9. In the dialog box, click the **Add record...** button. In the fields that appear, enter the values as shown in Fig. 2.11—3.

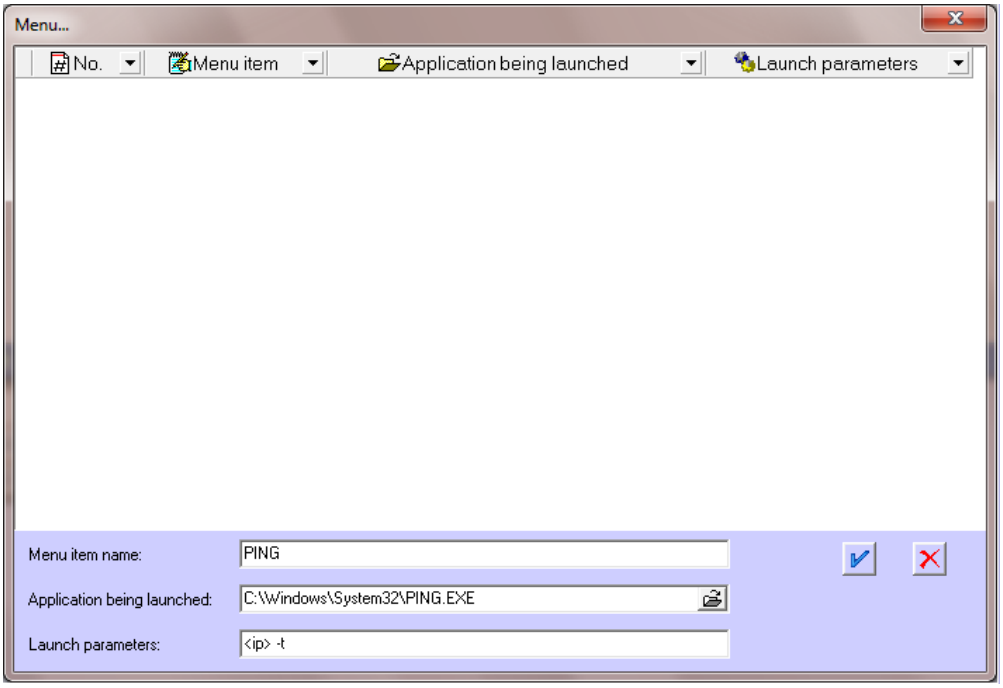


Fig. 2.11—3 Adding item

The string <ip> is a reserved expression: the real IP address of the object will be "swapped in" here when the application is called. This string must be entered in lower-case letters.

After you click the **Apply** button, a new entry appears, with a description of the new item in the context menu (Fig. 2.11—4).

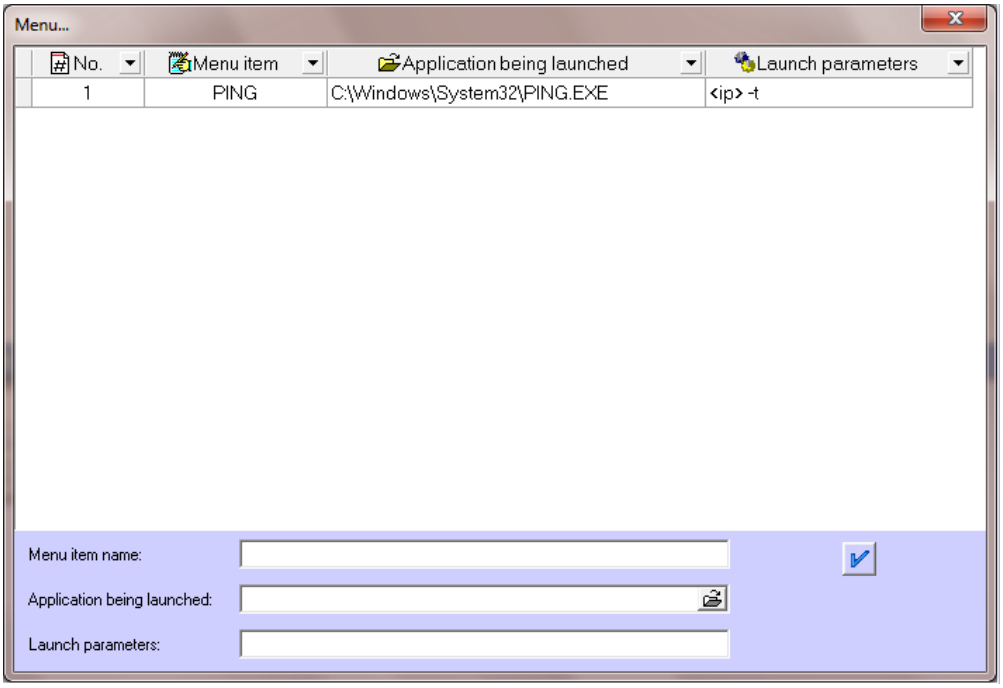


Fig. 2.11—4 Added item

Now when you right-click the area with an object name, a context menu appears in which the previously created **PING** menu item is present (Fig. 2.11—5).

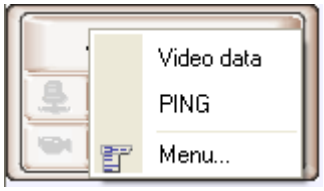


Fig. 2.11—5 PING menu item

When you select this menu item, the ping program is started in a separate window (Fig. 2.11—6).

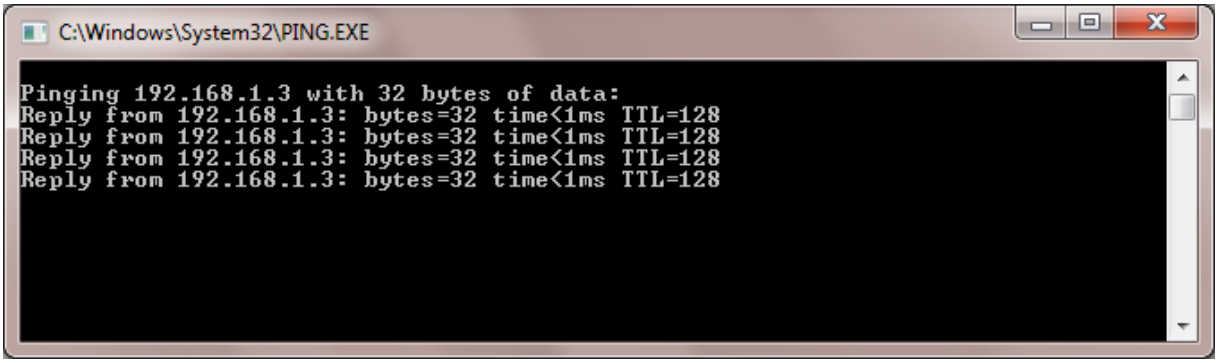


Fig. 2.11—6 Ping program

For objects connecting to ATM Intellect Workstation via RS-232, as well as for objects that have never connected to ATM Intellect Workstation, the value "127.0.0.1" is substituted for "<ip>".

The same method can be used to start other external applications, such as Radmin, etc.

3 Log panel

3.1 Log panel interface

The Log panel is a part on **ATM Monitoring** interface window. This window configuration is performed on the setting panel of the **ATM Monitoring** interface object and is described in the *ATM-Intellect. Administrator's guide*.

Log panel general view is shown in figure Fig. 3.1—1

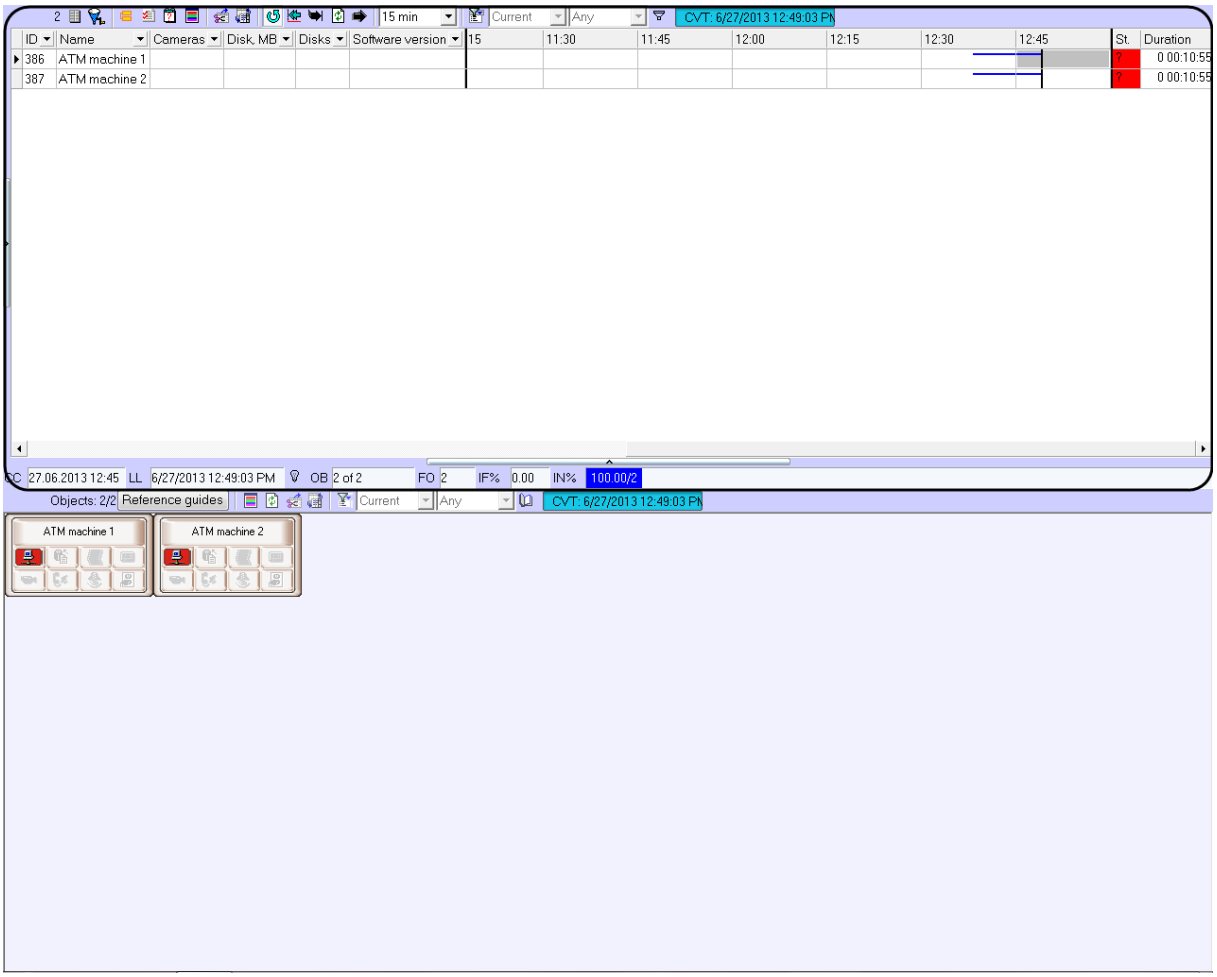


Fig. 3.1—1 Log panel

The Log panel (Fig. 3.1—2) consists of three main parts:

1. Navigation buttons panel
2. Workspace
3. Status panel

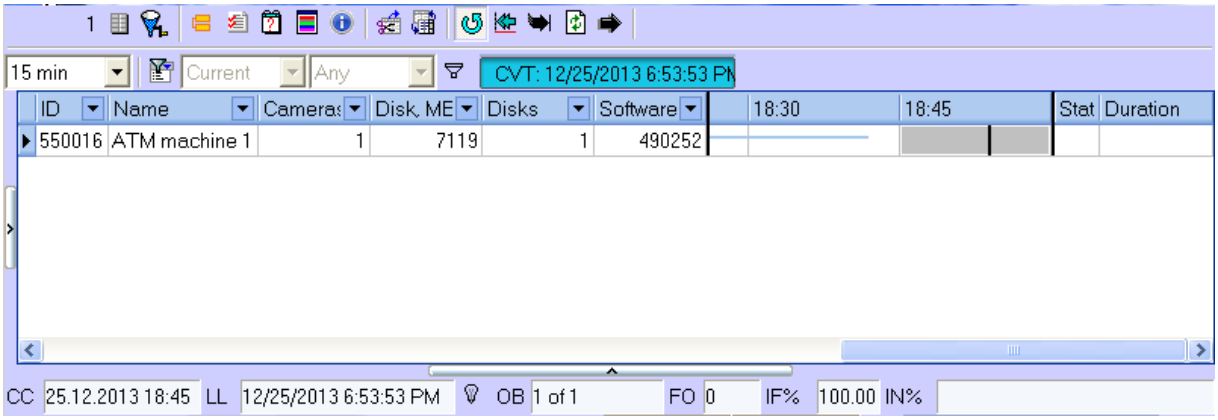


Fig. 3.1—2 Log panel

3.1.1 Alarms color code

Alarm situations in the Log panel are shown in a table with colored rows. The color of each alarm corresponds to the alarm type. The color assignments can be viewed by clicking the button ("Information about symbols"). The information window opens (Fig. 3.1—3).

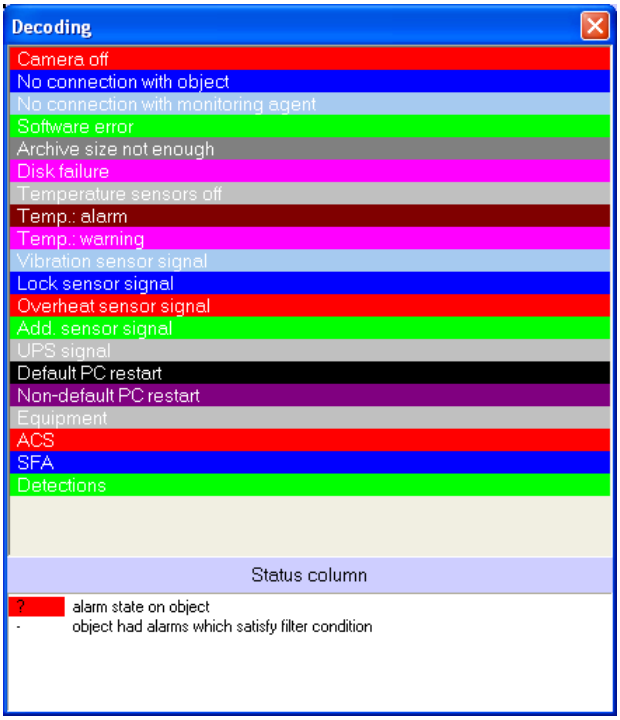


Fig. 3.1—3 Colors decoding

Vertical bars correspond to short alarms; horizontal bars correspond to long alarms (device operability).

Note. Alarm types are described in the Types of alarms section.

The length of bars is determined by the beginning and end (duration) of the alarm, in accordance with the selected scale. The scale is measured as the time interval for a single column (Fig. 3.1—4).

Fig. 3.1—4 The scale

3.1.2 Alarm list navigation

The column header always shows the beginning of the time period displayed by the column. Using the left and right keys and horizontal scrollbar, the user can go to any date within the data loaded. To quickly move to a date and time of interest, click the button ("Go to date"). To jump to the end of the data, click the button ("To end"). To jump to the date on which an error began, click the button ("To beginning of current error").

Since data is loaded into the system continuously, it is necessary to automatically refresh the on-screen data display. The button serves this purpose ("Auto update"). Clicking this button checks for new alarm data in the database. If such data exist, the display is refreshed and jumps to the end of the displayed data. The date and time of the most recent update (CVT) are shown to the right of the filters.

If the Auto update button is not clicked, the displayed data may become out of date: data was last loaded after the CVT. If this happens, a lightbulb appears in the status panel (Fig. 3.1—5). The lightbulb indicates that the current display is out of date and can be refreshed by clicking the button ("Update data"). A refresh is performed during jumps to the end, selection and application of filters, and many other actions.

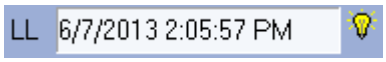


Fig. 3.1—5 The lightbulb indicator

3.1.3 Ignoring objects

"Ignored" objects are never shown in the form on screen. Operations with ignored objects is described in the detail in the *Ignoring objects* section.

3.1.4 The status panel

3.1.4.1 General information

The status panel (Fig. 3.1—6) shows the total number of non-ignored objects (OB) and number of objects with hardware problems (FO) that are currently displayed.

Fig. 3.1—6 The status panel

The status panel also shows the beginning of the time period for the column of the current cell (CC), time at which data was most recently loaded into the database (LL).

3.1.4.2 Functionality and non-functionality indexes

The status panel also shows the index of functionality (IF) for the system and index of non-functionality (IN) for each of the reasons.

The **IF** is calculated as follows:

(1-Nnfo/Nt)*100

- *Nnfo* – number of objects that are not fully operable
- *Nt* – total number of objects

Indexes of non-functionality for each reason are calculated as follows:

(1-Nnfor/Nt)*100

- *Nnfor* – number of objects that are not fully operable due to this reason
- *Nt* – total number of objects

Indexes are calculated for non-ignored objects only. Indexes are not calculated and filters are never used for ignored objects. Indexes of non-functionality equal to 0 are not shown on the status panel.

If filtering is used and you want to calculate percentages in the status panel for filtered objects only, click the  button ("Count indexes only in filtered table strings").

3.2 The number of alarms displayed

The number of objects shown on the Log panel and Control Panel is set by the current filter (see *The number of alarms displayed*), if activated. Time periods are shown in the list on the left. If an alarm is recorded at an object during the selected time period, the alarm is placed in the list. The right list shows the durations of alarms to which the filter will react.

For example, with "Current" and "1 minute" for filter settings, only objects that currently have been having an alarm for at least one minute are shown. If "Day" and "5 hours" are selected, only objects that have had alarms during the last 24 hours that lasted at least five hours are shown.

3.3 Object status

The object status is shown in the "Status" column. Its color and contents are explained in the Explanation Panel (see *Alarms color code*). Note that in the Log panel, the **Status** column is shown in red only if the subject has at least one long ongoing alarm.

3.4 Alarm duration

Duration, the last column of the table, shows the duration of the current alarm for the object, in the format *number of days hh:mm:ss.*

3.5 Information on the object

Click the button (Show Inspector, Ctrl+I) to view a special area (Fig. 3.5—1) in the upper portion shows all information about the currently selected object.

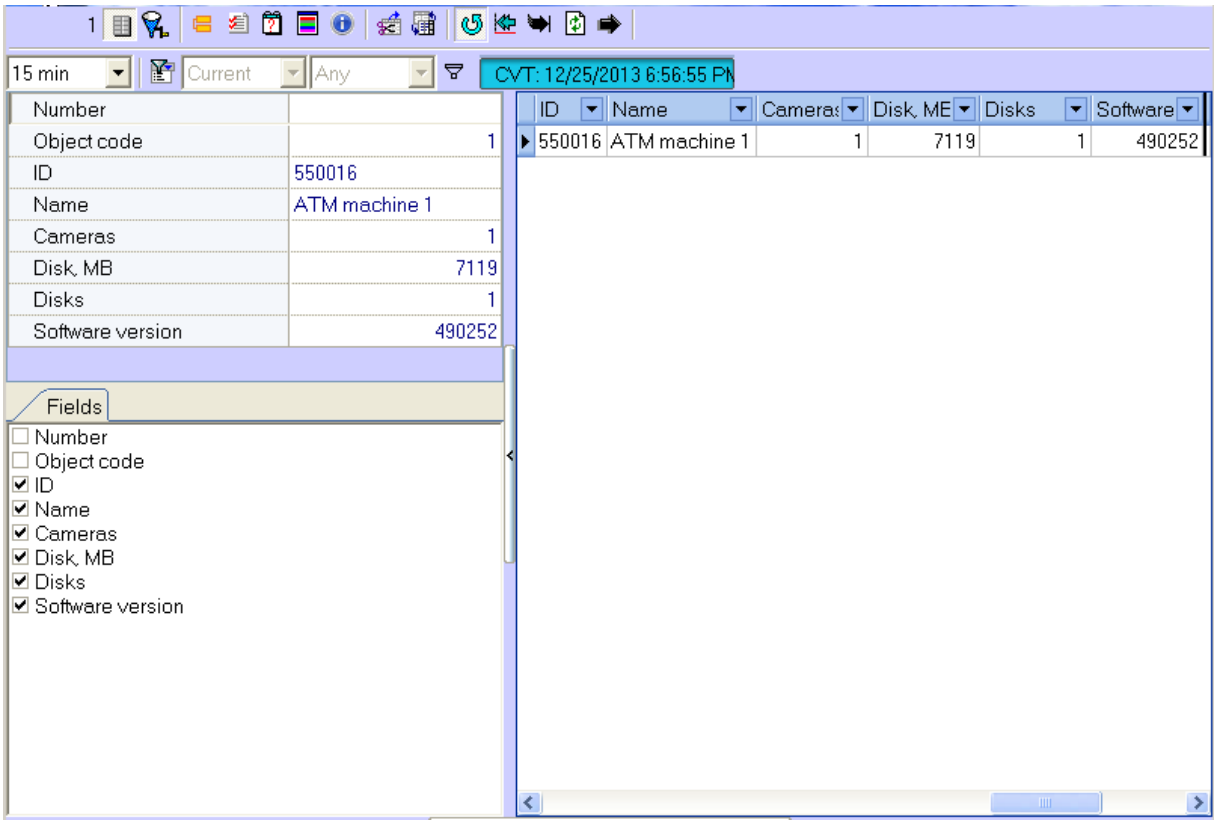


Fig. 3.5—1 Information about the currently selected object

The lower part contains three tabs: **Fields**, **Archives**, and **Cameras** (Fig. 3.5—1). Information on selected options is shown as columns in the main list of the Log panel workspace (Fig. 3.5—2).

ID	Name	Cameras	Disk, MB	Disks	Software version	Arch. 1	12:45	13:00
550016	ATM machine 1	1	31287	1	49058	3		
550017	ATM machine 2							

Fig. 3.5—2 Displaying information in the main list of the Log panel

To receive detailed information about object click it in the **Log panel** and click the button ("Show detailed information"). The **Details** window will display (Fig. 3.5—3).

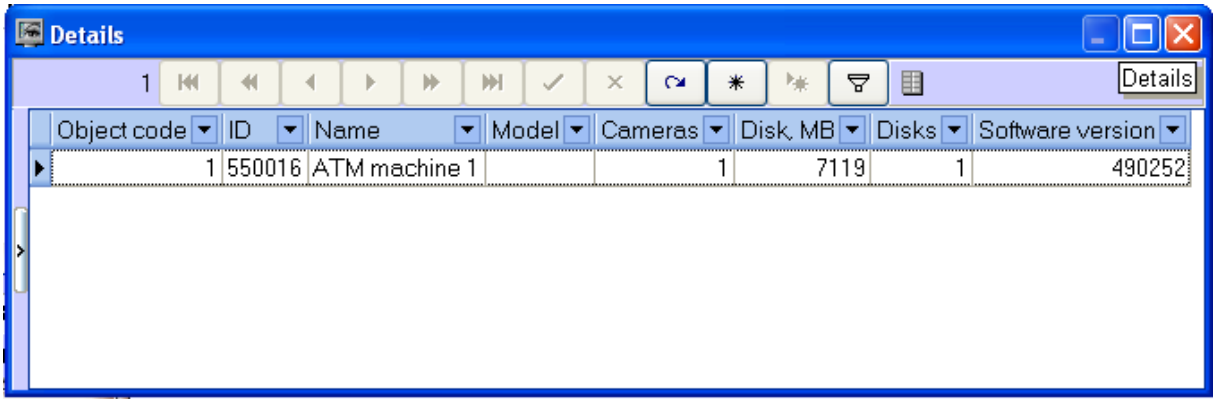


Fig. 3.5—3 Details window

Click the button ("Show inspector Ctrl+I") in the **Details** window to display the special area (Fig. 3.5—4) in the top part of which the information about the current selected object is listed.

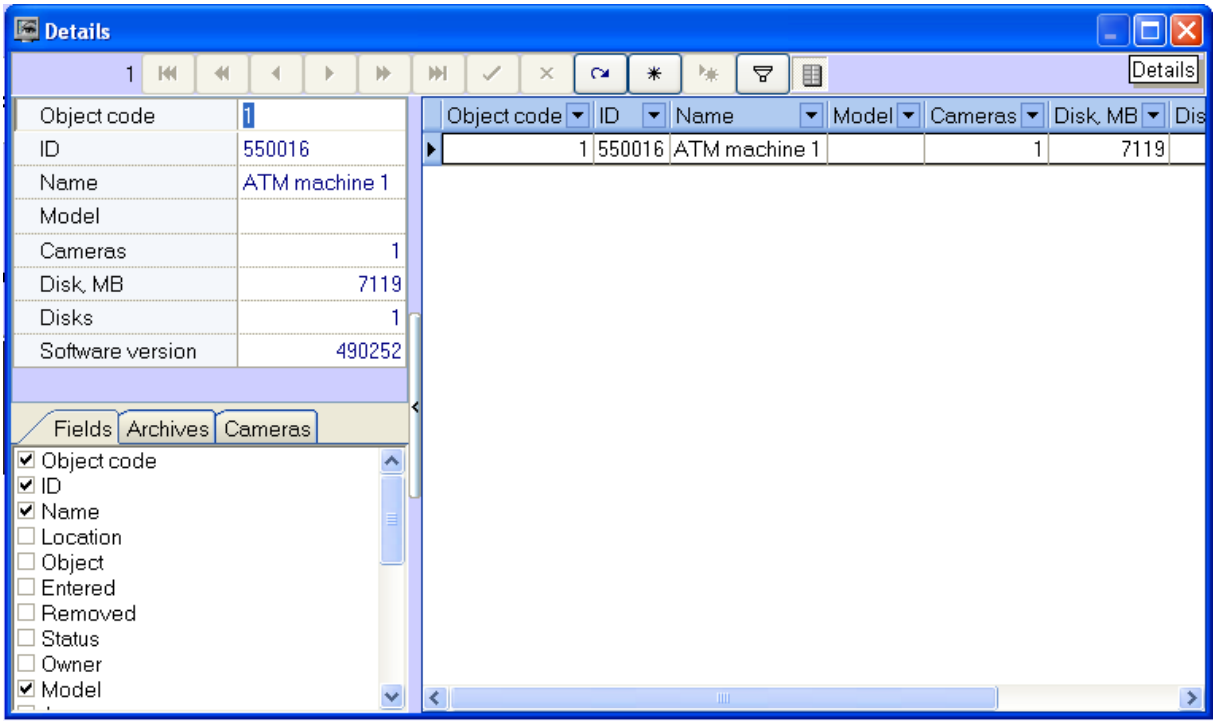


Fig. 3.5—4 Information displaying area

In the bottom part there are 3 tabs: **Fields**, **Archives** and **Cameras** (Fig. 3.5—5).

Fig. 3.5—5 Fields, Archives and Cameras tabs

Information on selected options will be displayed in view of columns in the main list of **Details** window.

Data in the **Cameras**, **Disk**, **MB**, **Disks**, **Version**, and all fields in the **Archives** and in **Columns** tabs, are filled in automatically when packets about technical status are received from objects. If these fields are not filled in for the object, a connection has never been established with the object.

The **Camera** field shows the number of video cameras at the object.

The **Disk**, **MB** field shows the maximum amount of free space on all logical disks to which archive video is recorded.

The **Disks** field shows the number of logical disks to which archive video is recorded.

The **Version** field shows the version of *ATM Intellect Pro* installed at the object.

The fields in the **Archives** tab show the days of stored video for each camera.

The fields in the **Camera** tab show the current status of each camera (on/off).

Note.

Size of video archive depth for each camera is defined on the ATM-Intellect Pro the following way:

Calculate the real number of days in which the camera performed the data recording in the video archive.

Example. The video surveillance system has been worked for 3 days. The camera performed recording to the video archive at the first and third day. At the second day the camera was disabled. For this camera the archive depth is equal to two days.

Click the button ("Show characteristics of devices") to view a special area (Fig. 3.5—6) that describes changes to the indicated fields over time (**Camera**, **Disk MB**, **Disks**, **Version**, etc.).

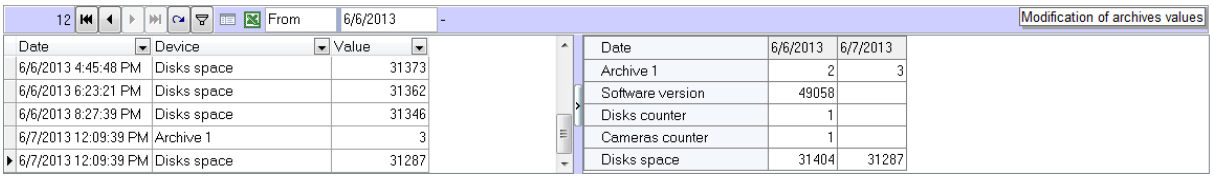


Fig. 3.5—6 Characteristics of devices in time

3.6 Exceeding the permissible number of failures

If there are more than 500 faults in the visible part of the timeline for the displayed object, alerts are not shown in detail for the object, and the background color becomes pink (Fig. 3.6—1).

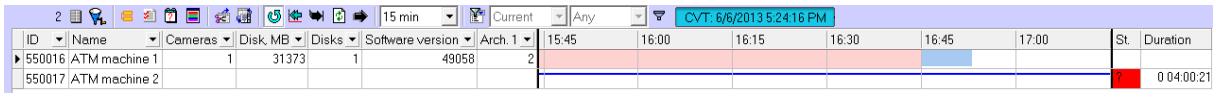


Fig. 3.6—1 More than 500 faults in the visible part of the timeline

Faults are calculated for a range of intervals, not for each interval. In the case shown (Fig. 3.6—1), they are counted for ten columns from 3:30 PM to 6:00 PM and for one column from 6:00 PM to 6:15 PM. Even if the maximum number of faults is exceeded only in three columns, all ten columns will become pink.

3.7 Forcibly closing alarm

A situation may rarely (or even never) happen when an alarm does not need to be classified as such. This could happen if the "temperature sensors set" option is accidentally enabled for an object. Monitoring displays an alarm "Temperature sensors off", indicating that the device does not work. After the "temperature sensors set" option is disabled for the object, the alarm in Monitoring does not end.

This discrepancy can be fixed by clicking the button ("Close error forcibly"). A list of the errors closed in this way can be seen by clicking the button ("Show closed errors"). An additional table is shown on the right (Fig. 3.7—1).

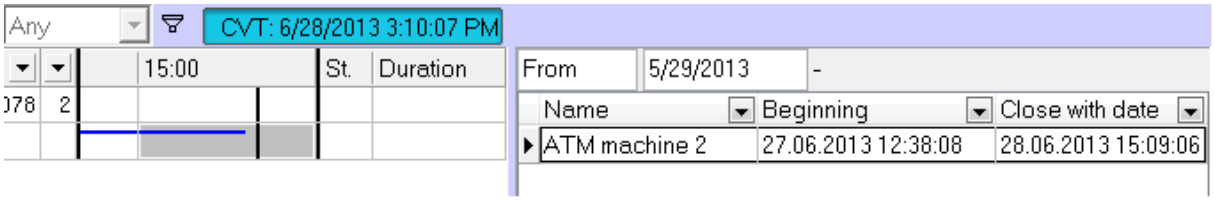


Fig. 3.7—1 Alarm closing

Left-clicking an entry in the alarm situation display area twice opens a dialog box, which explains the errors in the period of time described by the cell (Fig. 3.7—2).

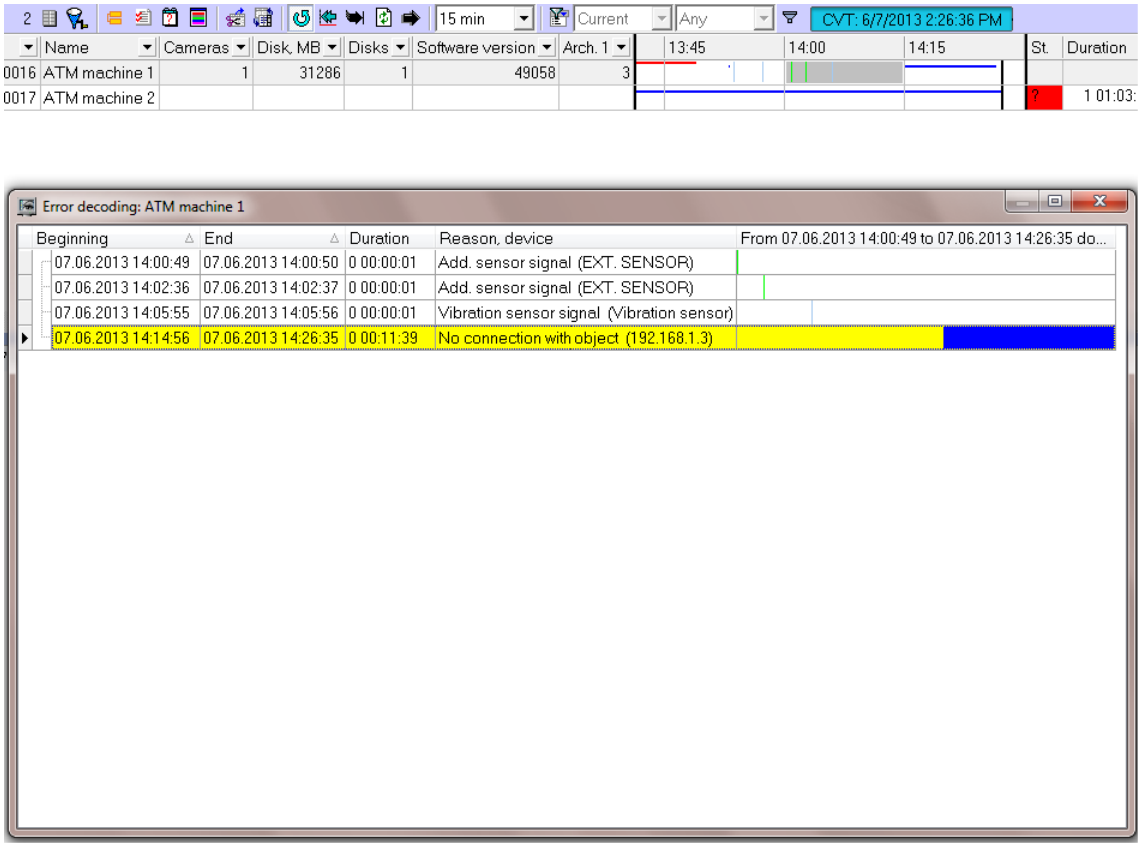


Fig. 3.7—2 Error decoding

Left-clicking an entry in the reference information area twice opens a dialog box, which contains a full description of object properties (Fig. 3.7—3).

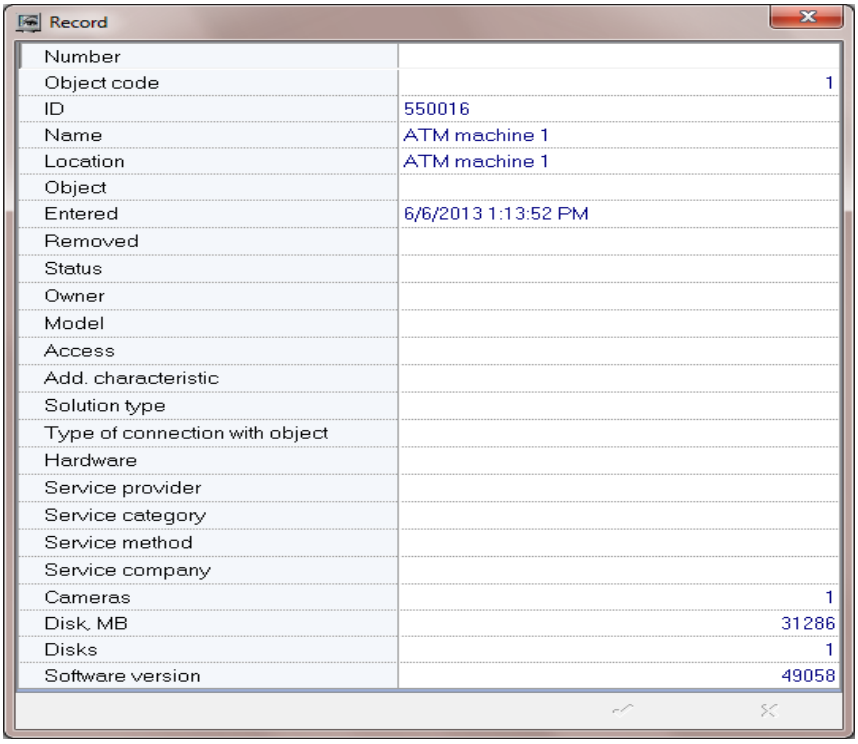


Fig. 3.7—3 Object reference information

4 Alarm messages window

To attract the extra attention to alarm situations use the **Alarm messages window** object (Fig. 3.7—1).

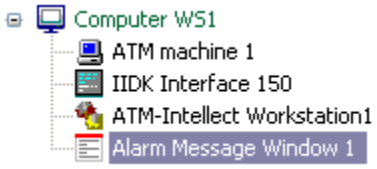


Fig. 3.7—1 Alarm messages window object

If there is the **Alarm messages window** object in the settings tree of Intellect software, the alarm situations will be displayed in the **Control panel** and **Log panel** interface objects and in the separate pop-up window. Examples of such pop-up windows are displayed in figures Fig. 3.7—2 and Fig. 3.7—3.

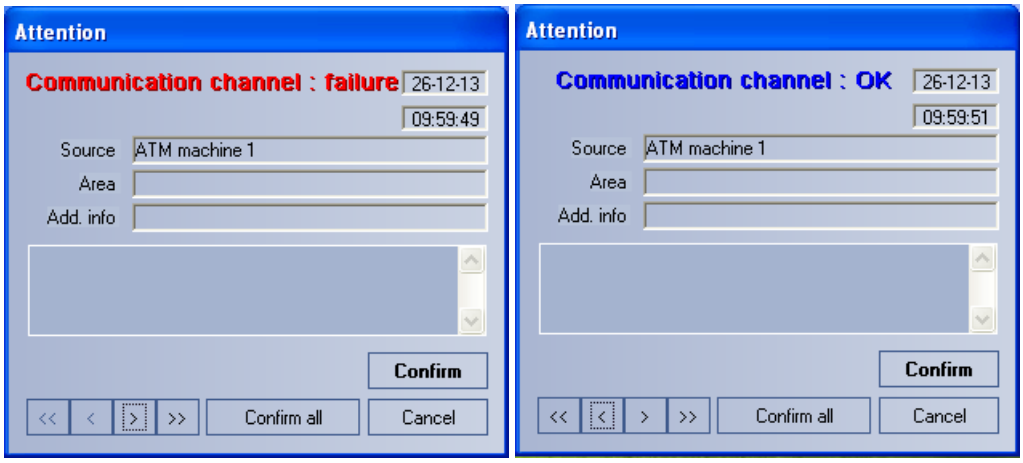


Fig. 3.7—2 Alarm messages for Communication channel

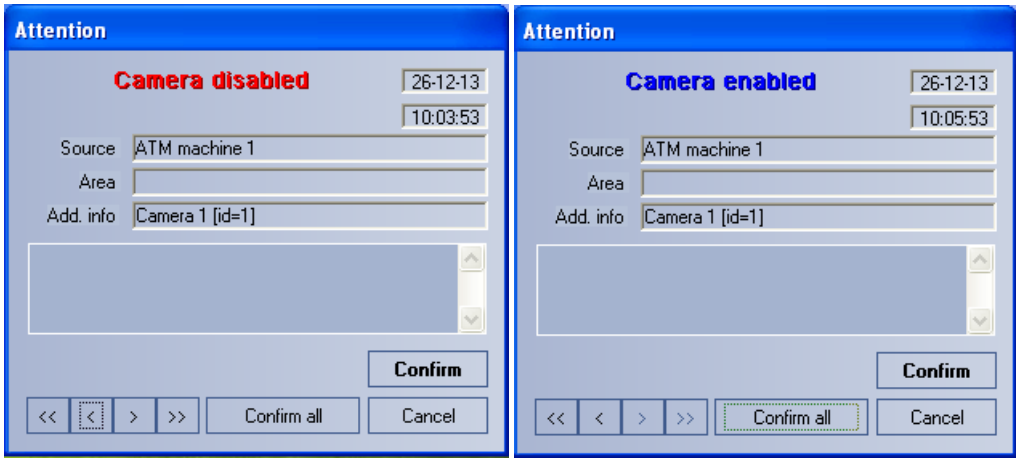


Fig. 3.7—3 Alarm messages for camera enabling and disabling

5 Search in archive

5.1 Search in archive purpose

The Search in archive component does the following:

1. Generates and sends search queries for captioned videos, and receives video info search results.
2. Generates and sends search queries for video frames, both captioned or uncaptioned, and receives video info search results.
3. Generates and sends search queries (based on video info search) to the video archive for an object, and receives and visualizes the search results (frames or fragments).
4. Views and prints search results (frames or fragments).

5.2 Video archive search request for captions

To create and send a video archive search request (Search for captions mode), you must do the following:

1. Ensure that the **Search in archive** component is displayed (Fig. 5.2—1).

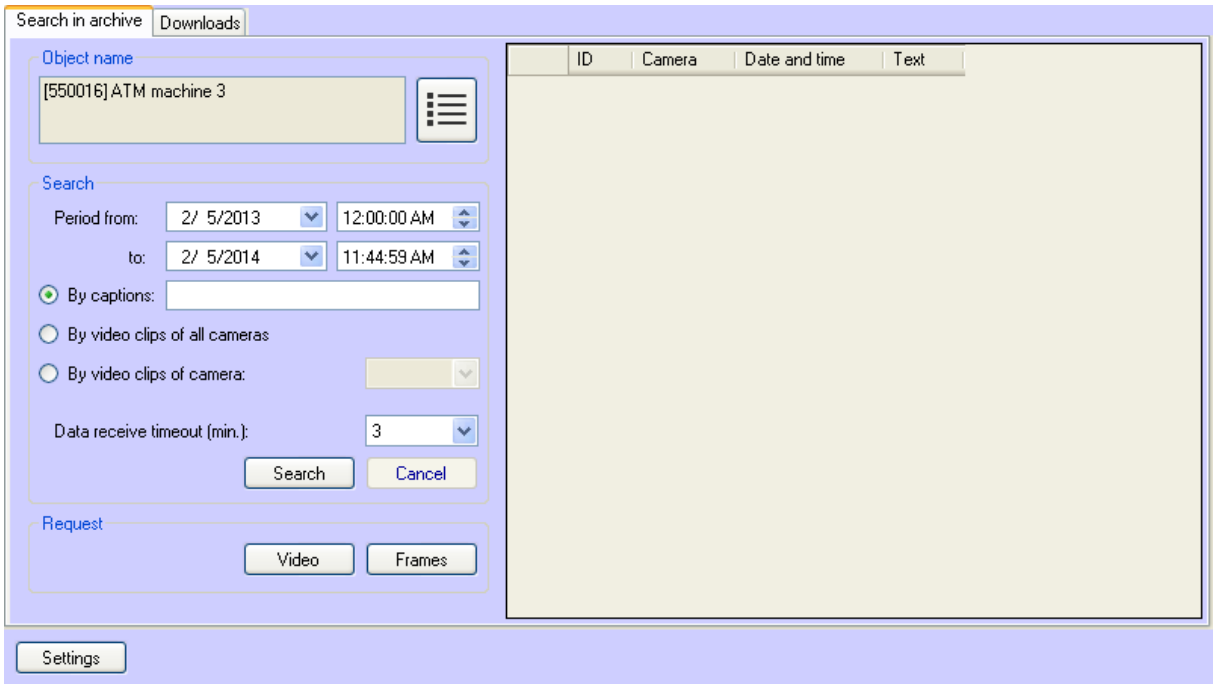


Fig. 5.2—1 Search in archive by captions

2. Create a search query for the archive, using the following parameters:

   2.1. Set date and time of search period beginning in the **Period from:** field.

   2.2. Set date and time of search period ending in the **to:** field.

   2.3. Set the switch into **By captions** position.

   2.4. Specify any keyword (available only in **Search for caption** mode).

3. Search timeout is specified in the **Data receive timeout (min)** list.

4. Select an object in the object description list and click the **Search** button.

   *Note. You can stop searching at any time, by clicking the **Cancel** button.*

5. If search is successful, the archive results are shown as a list of entries (Fig. 5.2—2). Only 500 results can be displayed.

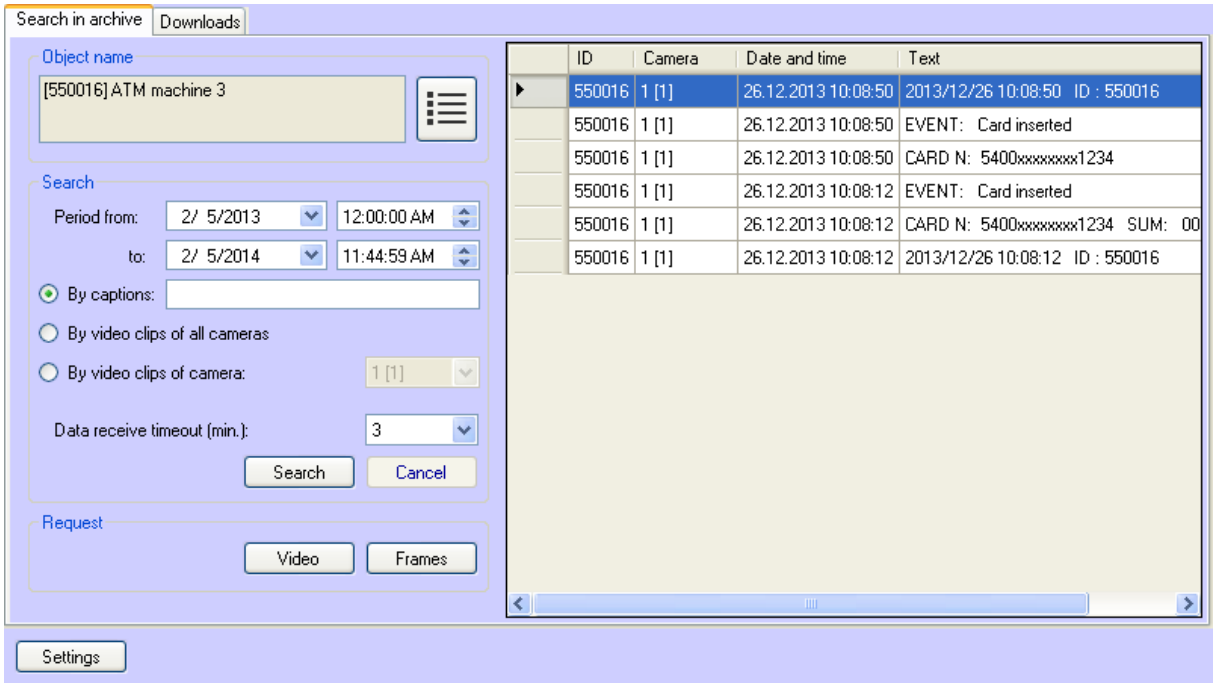


Fig. 5.2—2 Search results

Attention! These data are taken from the Intellect database at the object. Data retention time is configured in the Programming tab, in the General Settings section, under the Event archive size option (measured in days).

5.3 Video archive search request for video fragments

To create and send a request to the video archive (Search for video clips for all cameras mode), you must do the following:

1. Make sure that the **Search in archive** component is displayed (Fig. 5.3—1).

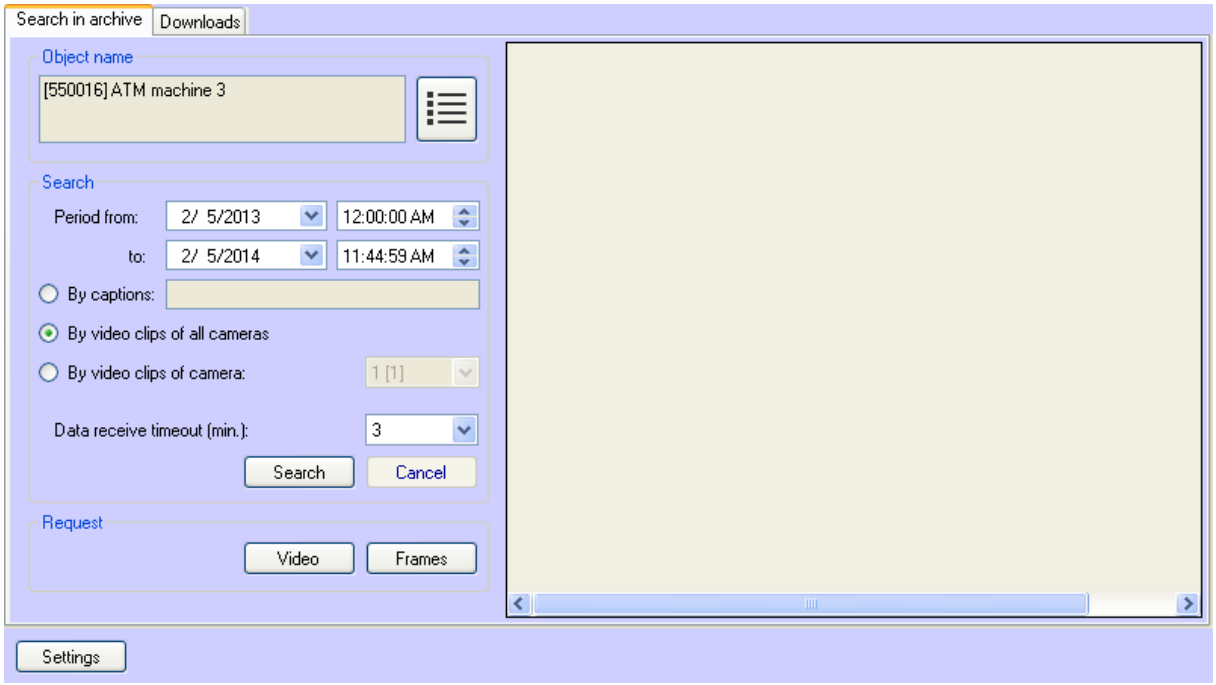


Fig. 5.3—1 Search by clips

2. Generate an archive search query, using the following parameters:

   2.1. Set date and time of search period beginning in the **Period from:** field.

   2.2. Set date and time of search period ending in the **to:** field.

   2.3. Set the switch into the **By video clips of all cameras** mode.

*Note. To search by video fragments of a specific camera set the switch into the **By video clips of camera** mode and specify the camera in the drop-down list.*

3. Select an object in the **Object name** list and click the **Search** button. If search is successful, the archive results are shown as a list of entries (Fig. 5.3—2). Only 500 results can be displayed.

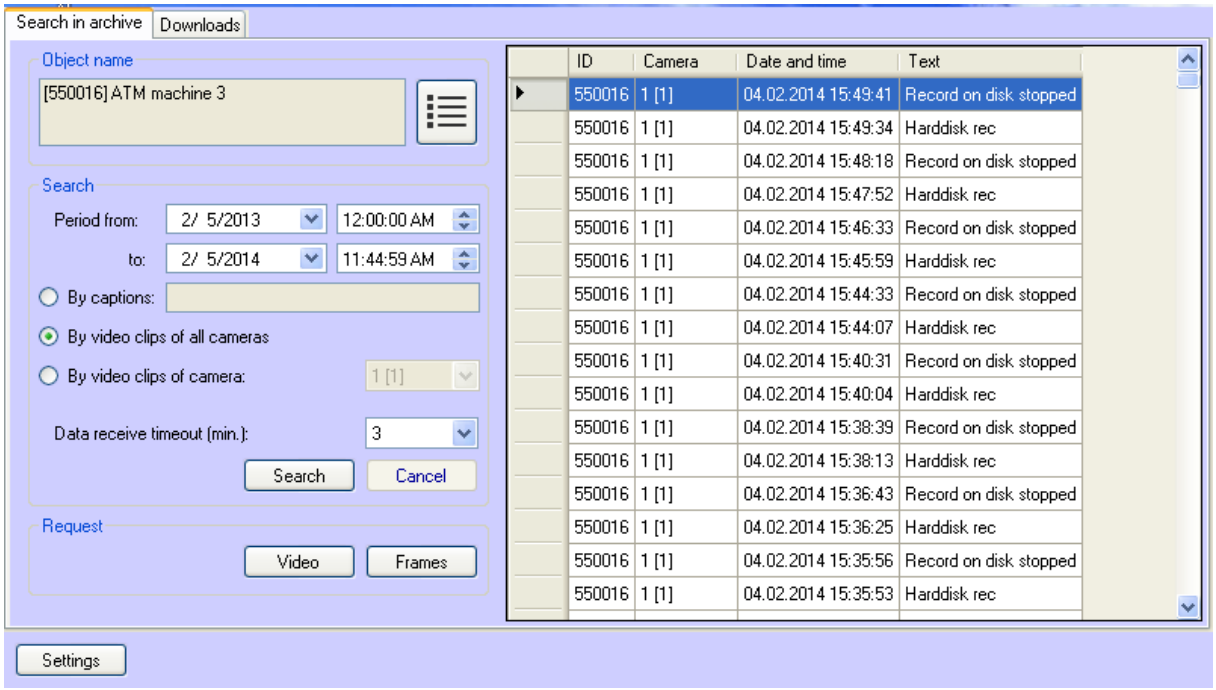


Fig. 5.3—2 Search results

4. The data so obtained can be used to generate an archive query (see *Video query*).

Attention! These data are taken from the Intellect database at the object. Data retention time is configured in the Programming tab, in the General Settings section, under the Event archive size option (measured in days).

5.4 Frame query

The Search in archive component allows querying video frames from an object. To do that, proceed as follows:

1. Perform video search by captions or by clips as described in the corresponding sections.
2. Search results are displayer as a list. Click the right mouse button on a field of interest in the list of results. The menu with **Video query** and **Frame query** items is displayed.
3. If **Frame query** item is selected, the **Frame query** dialog box appears (Fig. 5.4—1). You can also call this dialog box by clicking **Frames** button in the **Query** group.

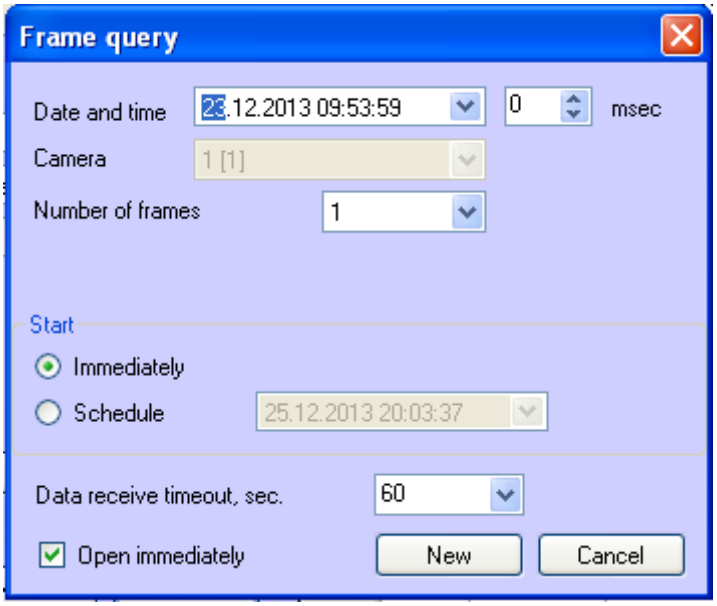
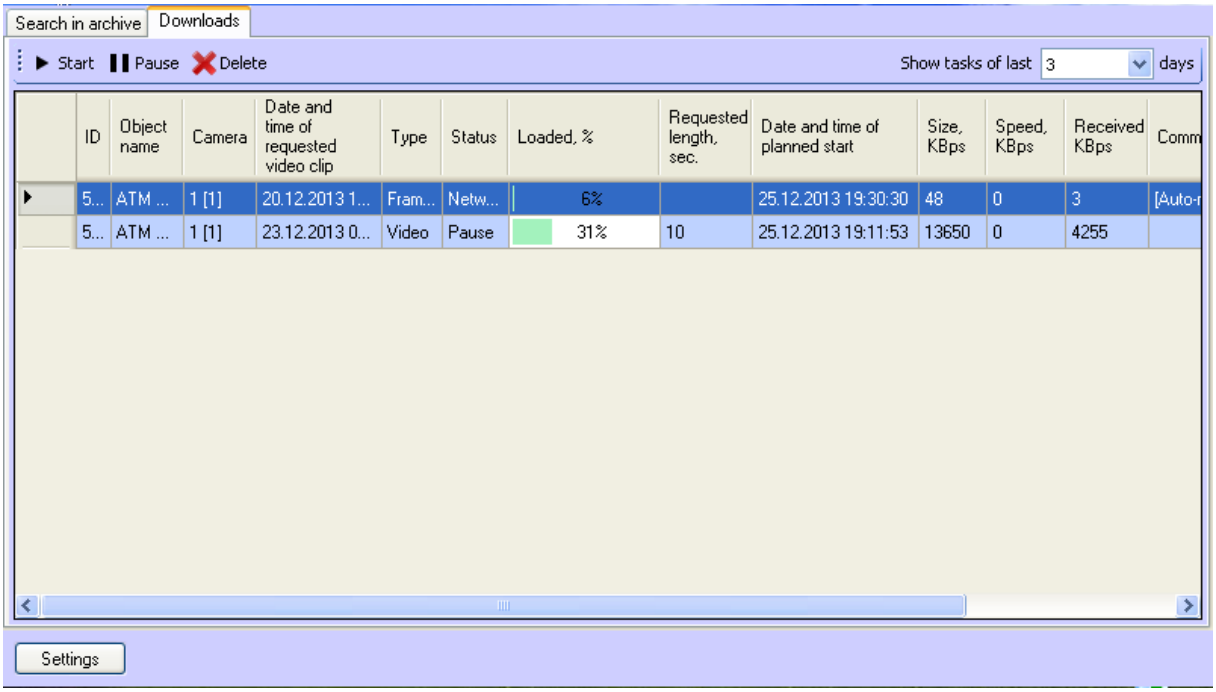


Fig. 5.4—1 Frame query

5. The **Date and time** and **Camera** fields are automatically filled.
6. The **msec.** field allows specifying the query time to the millisecond.
7. If number of frames is more than one, the **Interval between frames** field appears. Interval between frames is specified with millisecond precision.
8. In the **Start** area select time to perform request: **Immediately** or **Schedule**.
9. Timeout of frame receiving is set in the **Data receive timeout, sec** field.
10. If the **Open immediately** checkbox is set, then after data download completed they will be placed into the archive and visualized. Otherwise data will only be placed into the archive. To view such data you can use the **Reports for ATM Monitoring** component.
11. After all fields vales are specified, press **New**.
12. Task process is viewed on the **Downloads** tab. If data downloaded successfully and if the **Open immediately** checkbox was set, the downloaded frame will be displayed (Fig. 5.4—2).



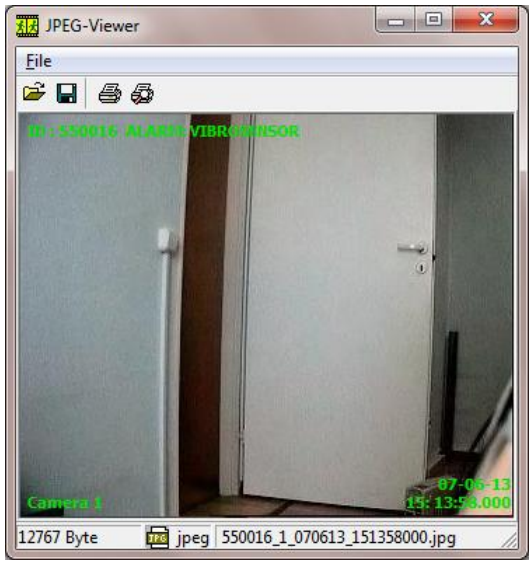


Fig. 5.4—2 Opening downloaded ile

5.5 Video query

The Search in archive component also allows querying small fragments from an object. To do so, proceed as follows:

1. Perform the search by captions or by video clips as described above.
2. The archive results are shown as a list of entries. Click the right mouse button on a field of interest in the list of results.
3. The menu with **Video query** and **Frame query** items is displayed.
4. If **Video query** item is selected, the **Video query** dialog box appears (Fig. 5.5—1). You can also call this dialog box by clicking **Video** button in the **Query** group.

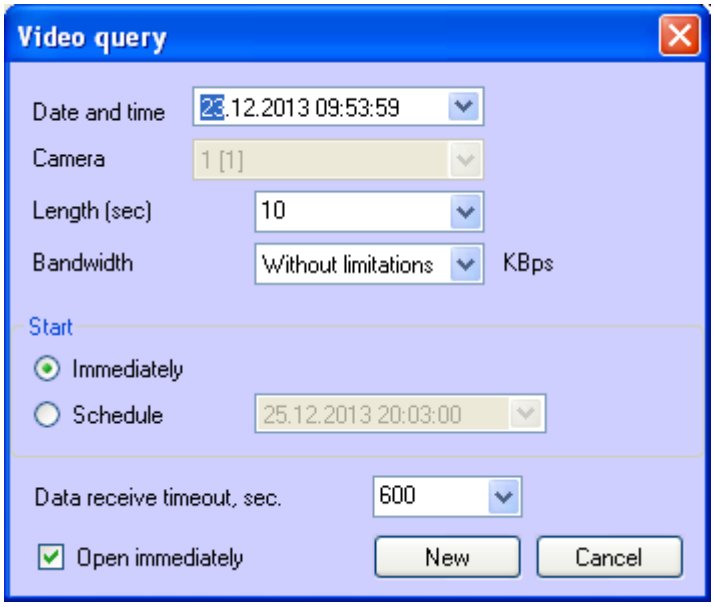


Fig. 5.5—1 Video query

5. The **Date and time** and **Camera** fields are automatically filled.

6. The **Length (sec)** field allows specifying the received video fragment duration.

*Note. If the value in the **Length (sec)** is more than 120 you will be proposed to use 120 value. This is done so that the user could consciously create queries in the result of which a large data file will be exported from the video archive on the ATM-Intellect Pro. To remove that restriction click **Settings** in the bottom left part of the Search in archive window and in the appeared dialog box (Fig. 5.5—2) specify the **Maximum length of loaded video clip, sec** value. After all fields vales are specified, press **New**.*

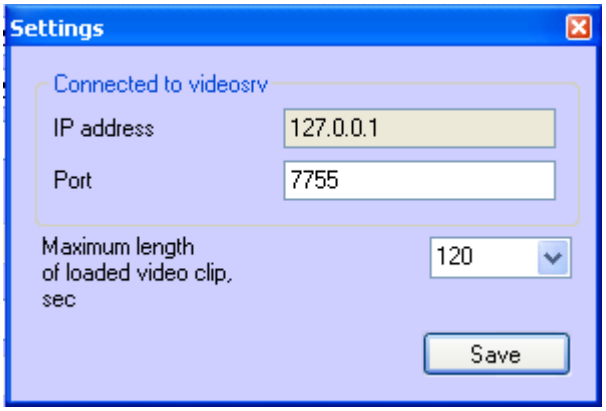


Fig. 5.5—2 Setting Maximum length of loaded video clip

7. To reduce use of network bandwidth the **Bandwidth** list is used.

8. In the **Start** area select time to perform request: **Immediately** or **Schedule.**

9. Timeout of video receiving is set in the **Data receive timeout, sec** field.

10. If the **Open immediately** checkbox is set, then after data download completed they will be placed into the archive and visualized. Otherwise data will only be placed into the archive. To view such data you can use the **Reports for ATM Monitoring** component.

11. After all fields vales are specified, press **New**.

12. Data reception process is viewed on the **Downloads** tab. During receipt of a video fragment, the file's size, amount downloaded and transmission speed are shown (Fig. 5.5—3).

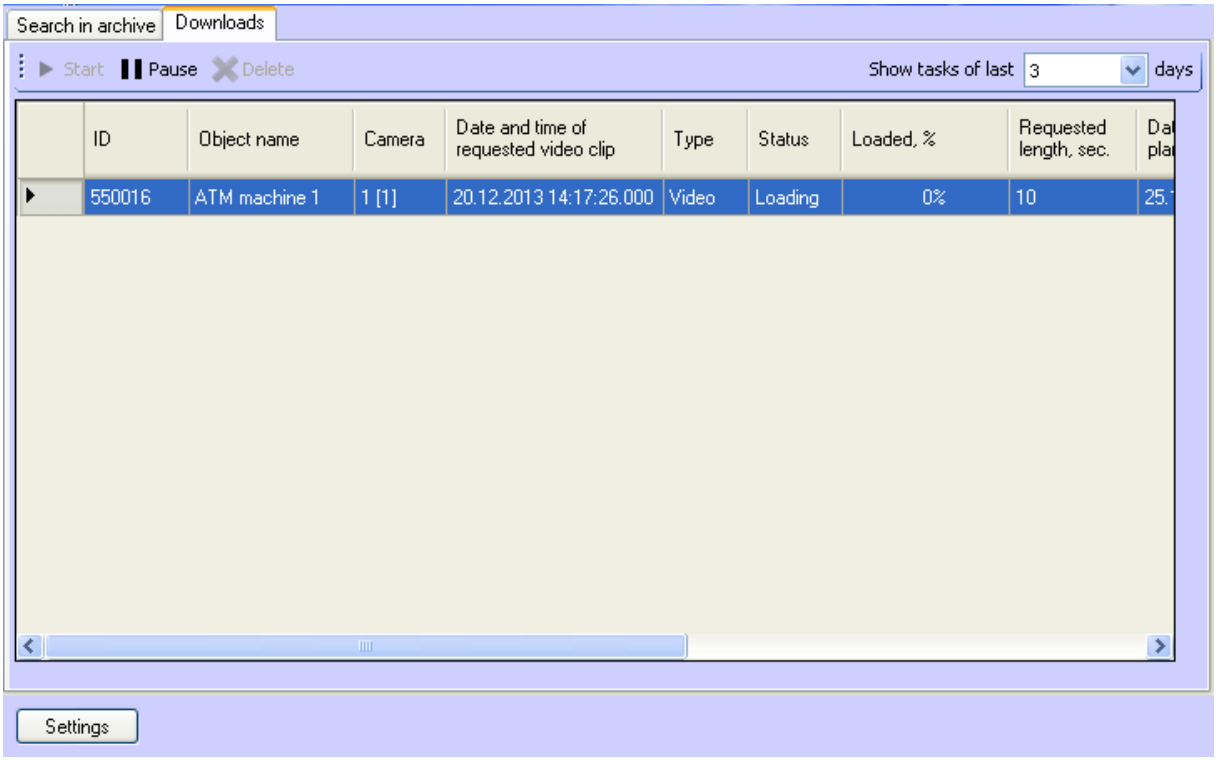


Fig. 5.5—3 Downloads tab

13. You can stop loading the video fragment at any time, by clicking the **Pause** button.

14. If the **Open immediately** checkbox is set, after it is loaded, the video fragment will be played in the Axxon Player (Fig. 5.5—4).

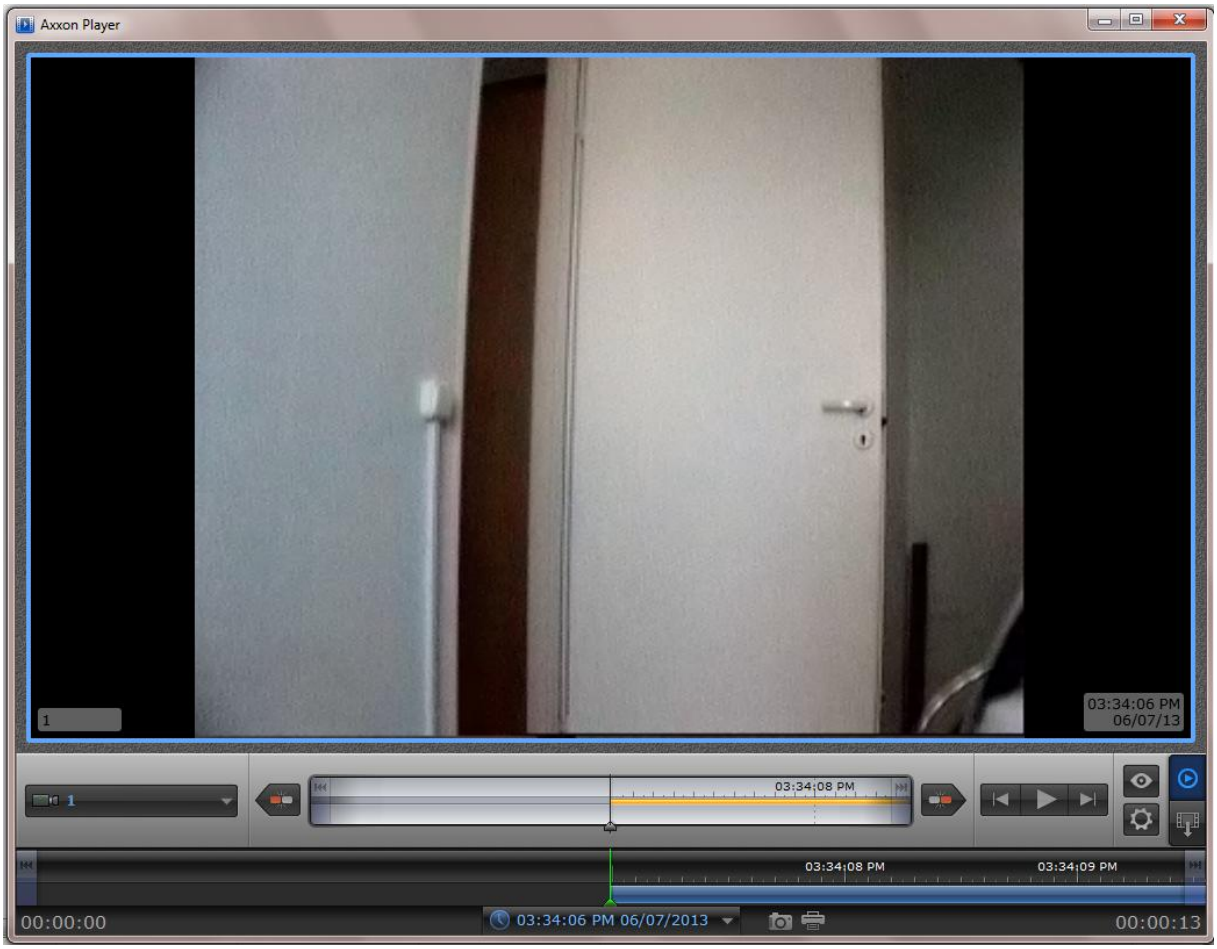


Fig. 5.5—4 Opening received fragment

Successfully completed task is marked with green in the list. Double-click on such task to visualize received video fragment or frame.

The *Search in archive* module supports broken download resume. If during the download the link with *ATM-Intellect Pro* was lost, after two minutes timeout the download status will be changed into “Network failure” and in the **Commentary** field the message will be displayed that no data transferring is performed in the moment. After ten seconds periodic attempts to resume data download will begin. Attempts period is one minute. After connection with *ATM-Intellect Pro* is reestablished, data download will continue from the position where it stopped. Broken download resume mechanism is implemented using temporary files that are stored on the *ATM-Intellect Pro* and *ATM-Intellect Workstation*. These files are stored for three days by default. After this time they are deleted. For example, if you create a clip download task and while loading press "**Pause**" and resume the download in five days, the data will be downloaded from the beginning. To change temporary files storage time set the required value in days in the StoreVideoFiles parameter of DWORD type in the HKLM\SOFTWARE\BITSoft\VHOST\VHostService registry branch. When the parameter is changed restart the Videosrv.exe.

The old tasks can be deleted from the list with **Delete** button on the **Downloads** tab. Tasks are stored for 100 days maximum. You can reduce the number of displayed tasks using the **Show tasks of last __ days** list in the upper right part of the **Downloads** tab (Fig. 5.5—3).

Attention!

1. ***If the requested video clip is very long (more than a minute long) it is necessary to increase the Data receive timeout value. This is due to the fact that it takes time to export a long video fragment on the ATM-Intellect Pro.***

2. ***If the Intellect software shuts down, all download tasks with "Downloading" status are paused. To resume download start these tasks manually.***

6 Characteristics of video data transfer during the transaction

Video data transfer from the *ATM-Intellect Pro* to the *ATM-Intellect Workstation* is performed by request from the *Search in archive* module and when the alarm is detected. Performing the financial transaction on the ATM the video data transfer is temporarily stopping. The following cases are possible:

1. Transaction starts during the video segments loading by the *Search in archive* module. In this case the loading is stopping (it is paused). In the **Comment** field the information on that pause is depends on transaction is displayed. Loading is continued after the transaction is completed.

2. Loading request from the *Search in archive* module is received during the transaction. Export of required video segment is performed on the *ATM-Intellect Pro*, but the data loading doesn't start. Loading is displayed as paused. In the **Comment** field the information on that pause is depends on transaction is displayed. Loading is continued after the transaction is completed.

3. Transaction starts during the alarm processing. In this case the loading is stopping (it is paused).While the transaction is not completed the list of "delayed" alarms for sending is created. After the transaction is completed the *ATM-Intellect Pro* starts sending of "delayed" deliveries which contain alarms corresponding to alarms detected during the transaction in order reversed to their receiving. The last "delayed" delivery will be send first, as the most actual.

4. Alarm appears during the transaction. The *ATM-Intellect Pro* sends messages with description of detected alarm or failure with description on the *ATM-Intellect Workstation* immediately, when the informational delivery is completed. Also the message with information on that loading of corresponding video data will be stopped is sending. While the transaction is not completed the list of "delayed" alarms for sending is created. After the transaction is completed the *ATM-Intellect Pro* starts sending of "delayed" deliveries which contain alarms corresponding to alarms detected during the transaction in order reversed to their receiving. The last "delayed" delivery will be send first, as the most actual.

In case of ATM financial transactions and video data from *ATM-Intellect Pro* are transferred by different connection links and if the good connection link is in use, it is possible to allow loading of video data during transaction. Create the string parameter «stop_data_by_trx» with the «0» value in the HKEY_LOCAL_MACHINE\SOFTWARE\BITSoft\VHOST\VHostService subregister.

7 Reports for ATM Monitoring

7.1 Reports for ATM Monitoring purpose

The **Reports for ATM Monitoring** component automates processing of statistics about system functioning. You can create the following types of reports:

1. Report on technical faults
2. Report on alarm situations
3. Video report
4. Statistical report
5. Statistical report by owner

General view of **Reports for ATM Monitoring** window is shown in figure (Fig. 7.1—1).

Fig. 7.1—1 Reports for ATM Monitoring window

Note. Format of date and time present in reports depends on system regional and language options

7.2 Report on technical faults

To start generating the report, click the System faults button (Fig. 7.2—1).

Fig. 7.2—1 System faults button

A dialog box then appears, with the parameters necessary for report generation (Fig. 7.2—2).

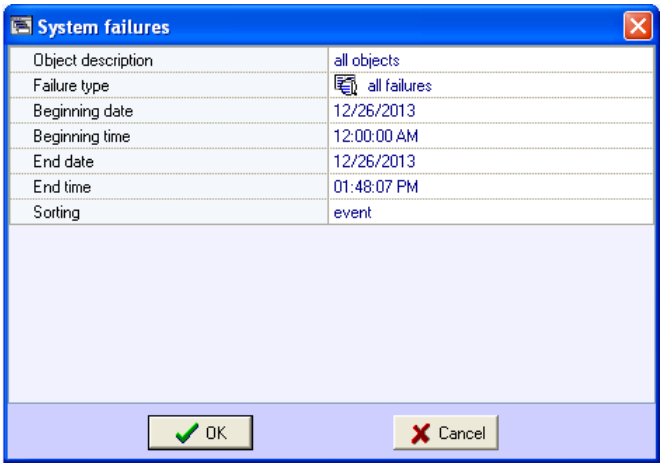


Fig. 7.2—2

This dialog box allows setting the following report parameters:

1. Time period for the report Use the Beginning date, Beginning time, End date, and End time parameters for this.

2. Object description (Fig. 7.2—3). This setting allows switching between the two report modes:

   2.1. Report on all system objects

   2.2. Report on one system object

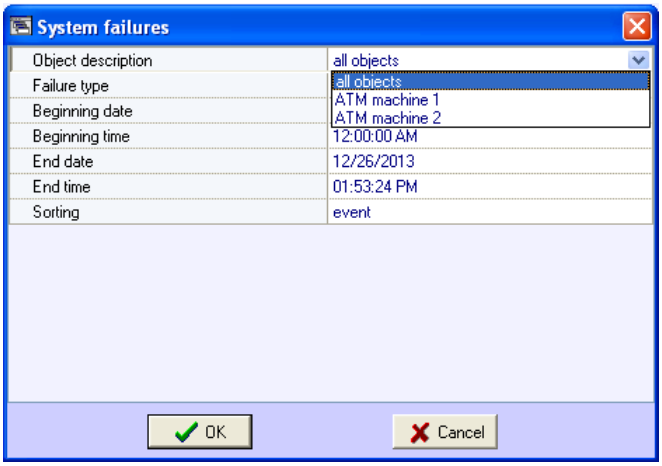


Fig. 7.2—3 Objects selection

3. Failure type (Fig. 7.2—4). This setting allows specifying the type of fault for which you want to generate a report. You can also create a report for all faults that occurred during a specified interval of time.

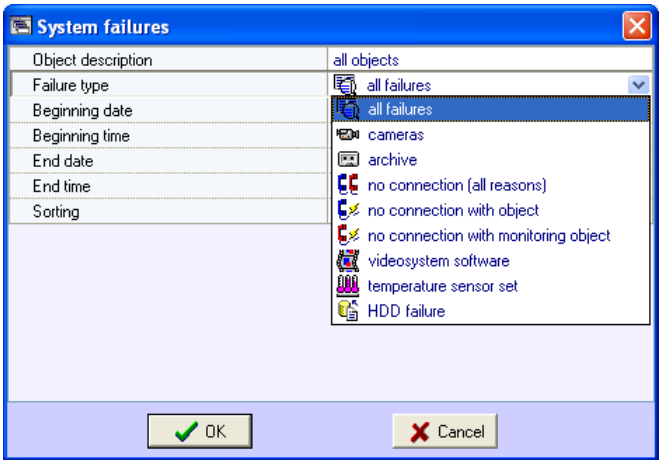


Fig. 7.2—4 Failure type selection

4. Sorting (Fig. 7.2—5). A report can be sorted in one of two ways:

   4.1. By events ("cameras", "archive", etc).

   4.2. By time of event start

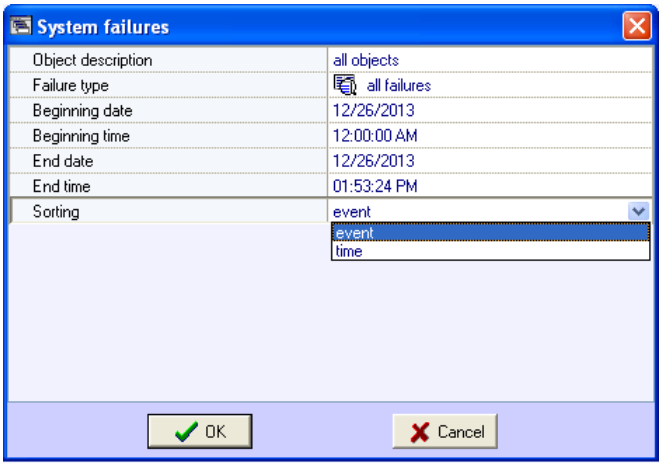


Fig. 7.2—5 Sorting selection

After configuring all parameters, click **OK**. The report appears in a new window (Fig. 7.2—6).

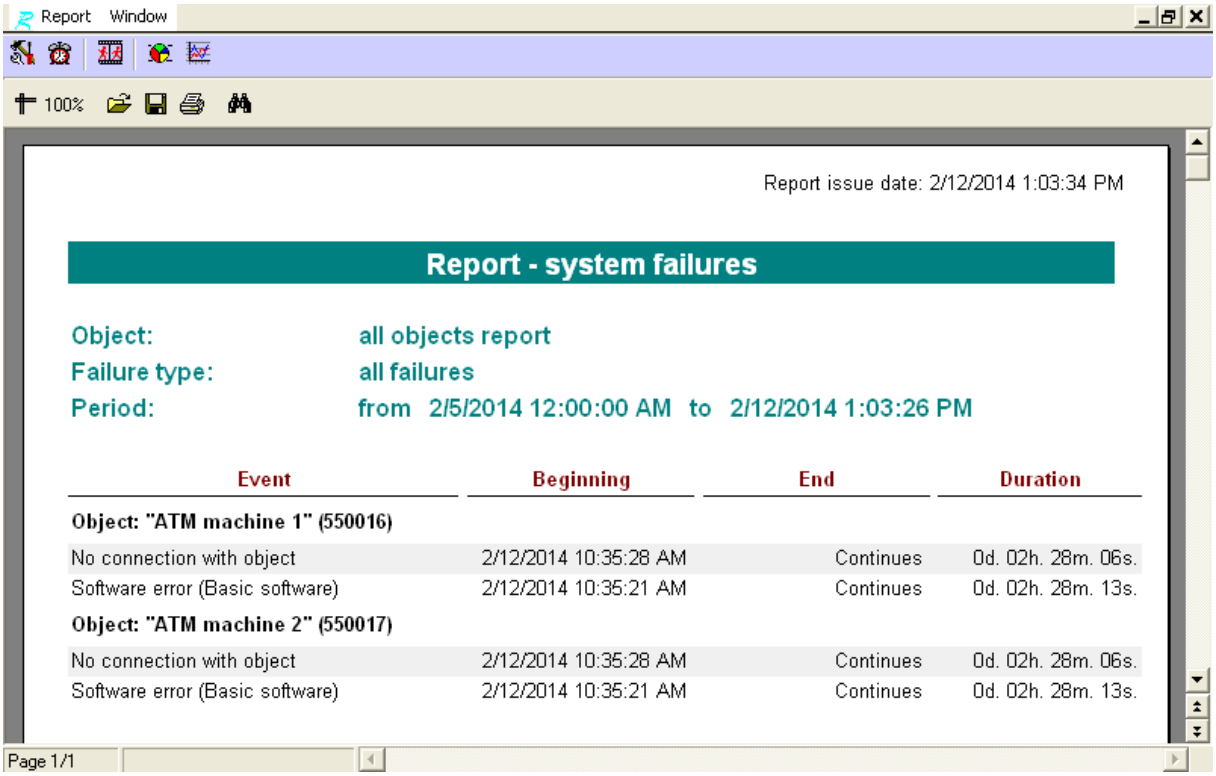


Fig. 7.2—6 Report for all objects

The same report, generated for a single object, looks as shown in Fig. 7.2—7.

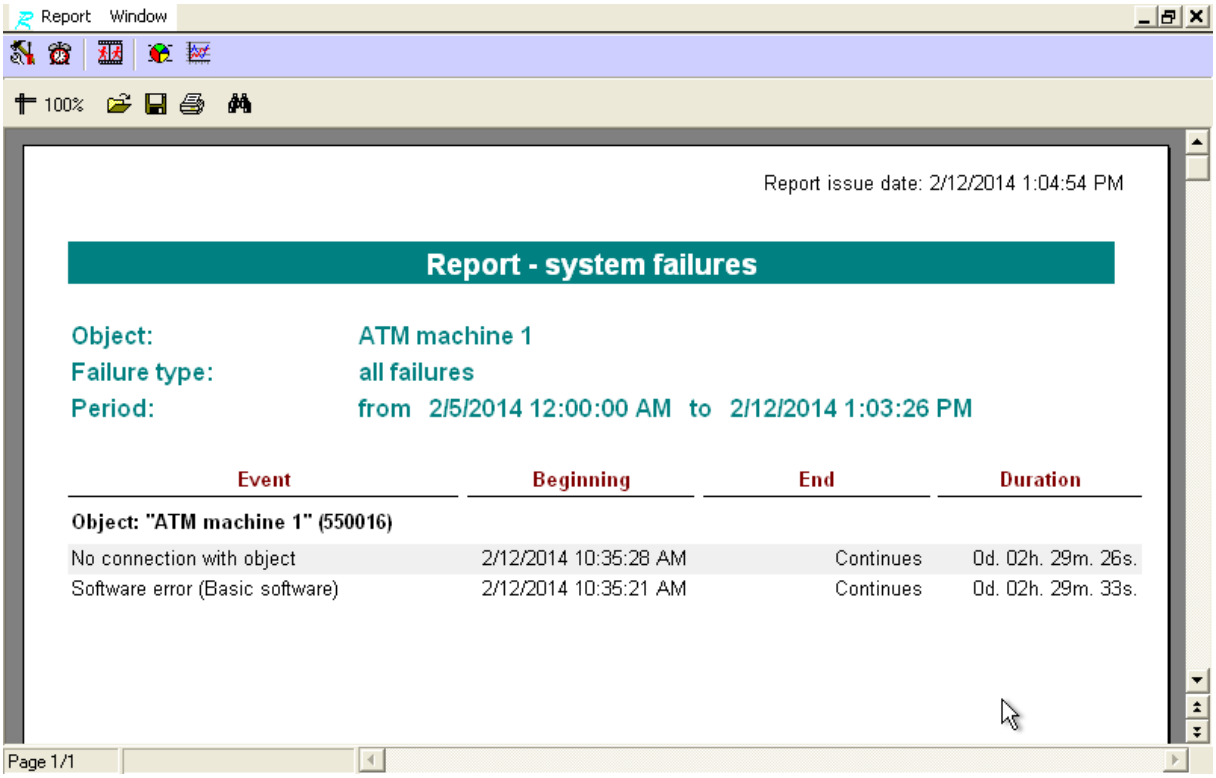


Fig. 7.2—7 Report for one object

Each report window has a toolbar (Fig. 7.2—8).

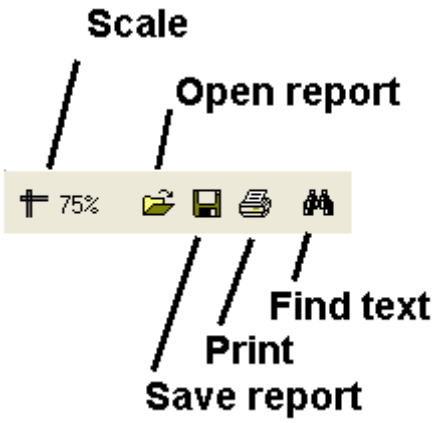


Fig. 7.2—8 Report toolbar

The **Save report** and **Open report** buttons are worthy of special attention. If the **Reports for Monitoring** component cannot access a printer or the report must be saved electronically for later viewing, you can save the report as a file with the .frp, .xls, .xml, .rtf, or .html extension. This file can later be opened on another workstation.

7.3 Report on alarm situations

To begin generating the report, click the Alarms button (Fig. 7.3—1).

Fig. 7.3—1 Alarms button

A dialog box then appears, with the parameters necessary for report generation (Fig. 7.3—2).

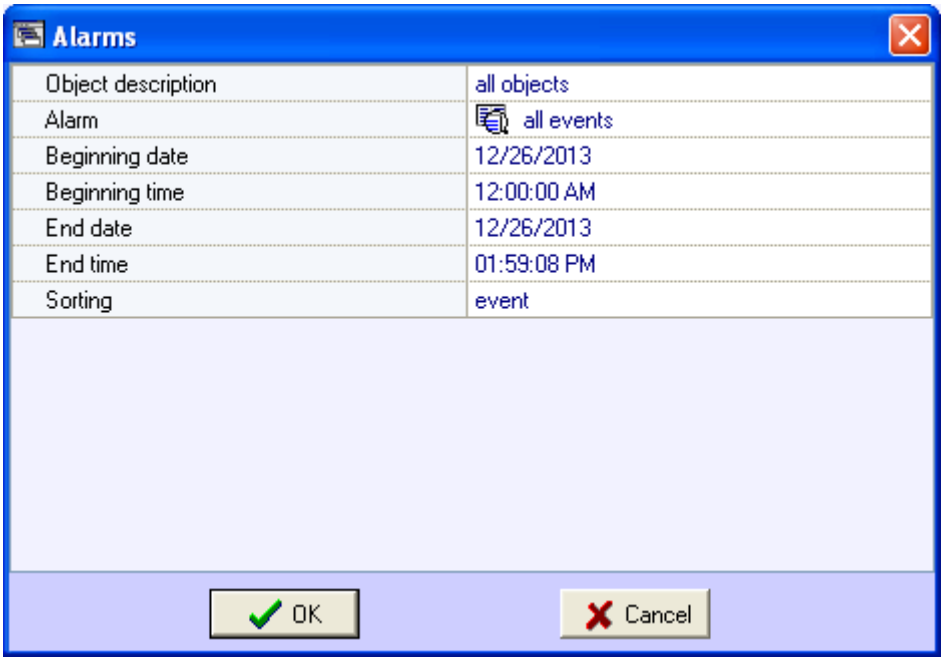


Fig. 7.3—2 Alarms report

This dialog box allows setting the following report parameters:

1. Time period for the report Use the Beginning date, Beginning time, End date, and End time parameters for this.

2. Object description (Fig. 7.3—3). This setting allows switching between the two report modes:

   2.1. Report on all system objects

   2.2. Report on one system object

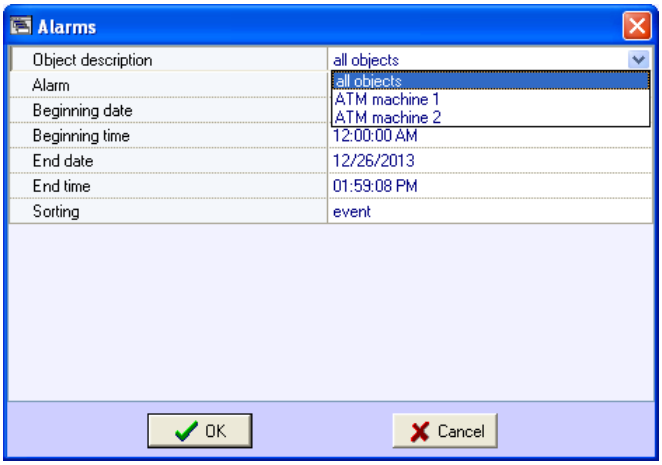


Fig. 7.3—3 Object selection

3. Alarm event (Fig. 7.3—4). This setting allows specifying the type of alarm event for which you want to generate a report. You can also create a report for all alarm events that occurred during a specified interval of time.

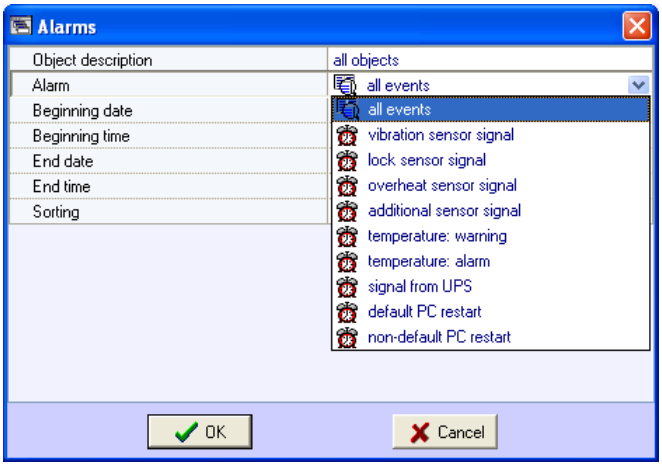


Fig. 7.3—4 Alarm event selection

4. Sorting (Fig. 7.3—5). A report can be sorted in one of two ways:

   4.1. By event ("Signal from vibration sensor", "Signal from lock sensor", etc.)

   4.2. By time of event start

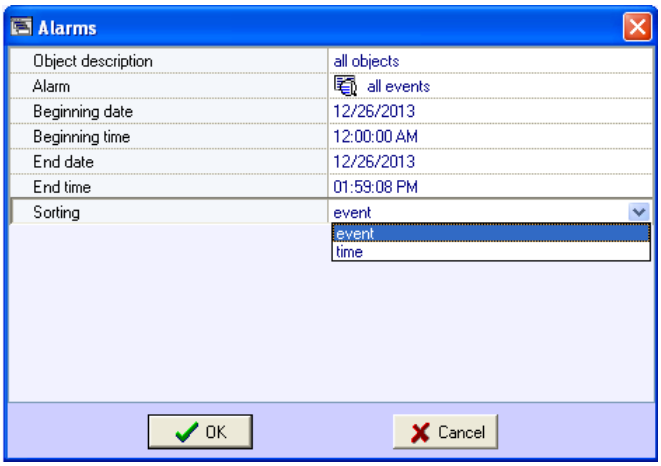


Fig. 7.3—5

After configuring all parameters, click **OK**. The report appears in a new window (Fig. 7.3—6).

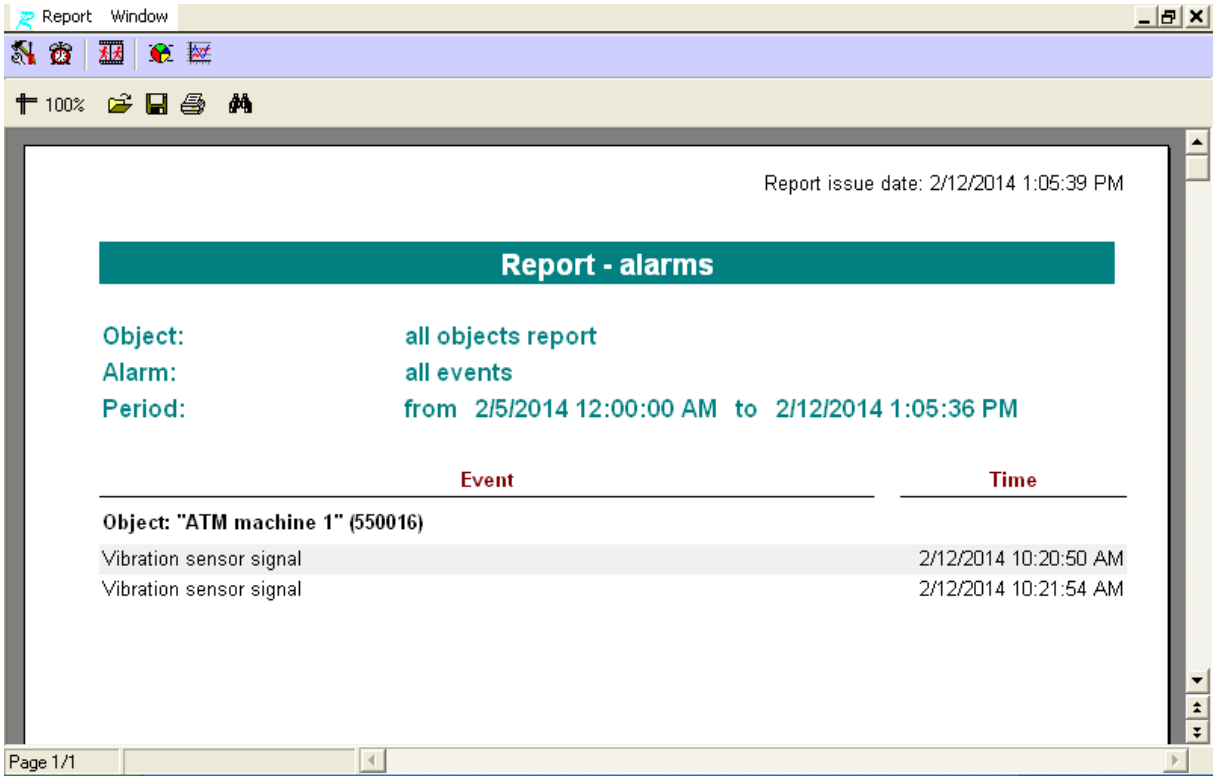


Fig. 7.3—6 Report on alarms

7.4 Video report

To start generating the report, click the Video report button (Fig. 7.4—1).

Fig. 7.4—1 Video report button

A dialog box then appears, with the parameters necessary for report generation (Fig. 7.4—2).

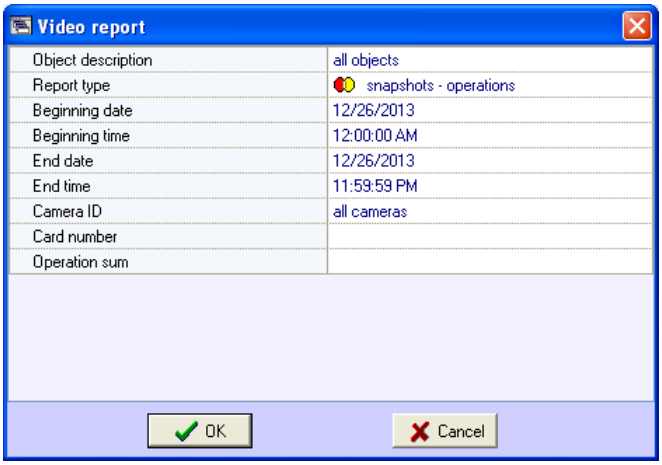


Fig. 7.4—2 Video report

This dialog box allows setting the following report parameters:

1. Time period for the report Use the Beginning date, Beginning time, End date, and End time parameters for this.

2. Object description (Fig. 7.4—3). This setting allows switching between the two report modes:

   2.1. Report on all system objects

   2.2. Report on one system object

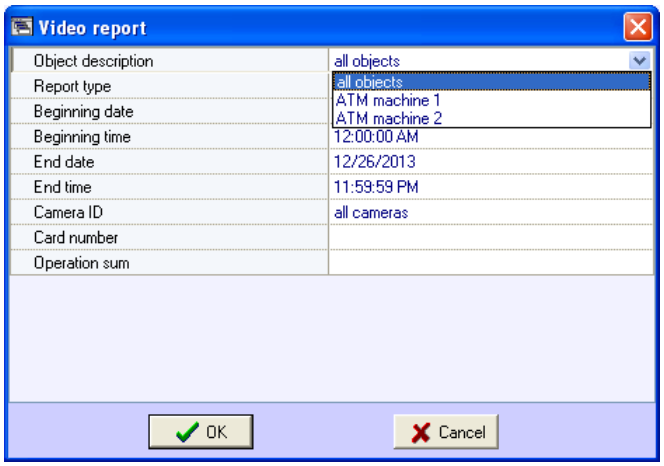


Fig. 7.4—3 Selecting object

3. Report type (Fig. 7.4—4). This setting allows switching between the five available reports:

   3.1. snapshots – operations. These are snapshots during the time when bank card transactions were being performed at the ATM.

   3.2. snapshots – alarms. These are snapshots after an alarm sensor was triggered at the object ("Vibration sensor", "Lock open sensor", etc.).

   3.3. snapshots – other. These are snapshots obtained by a custom video archive query.

   3.4. video frames – alarms. These are video frames obtained after an alarm sensor is triggered at the object.

   3.5. video frames – other. These are video frames obtained by a custom video archive query.

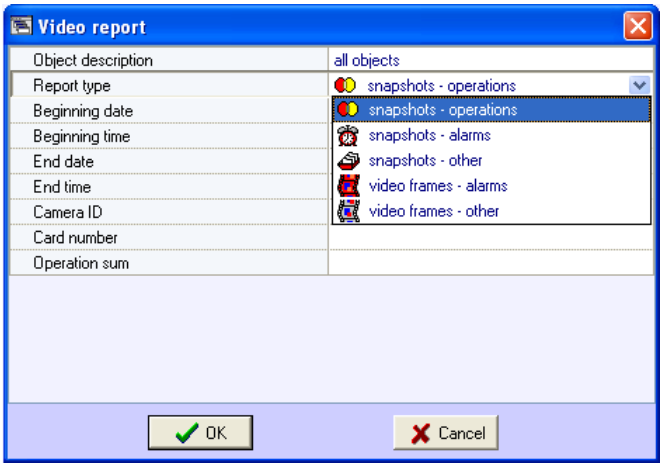


Fig. 7.4—4 Setting report type

4. If the **snapshots – operations** report type is chosen, the **Camera ID**, **Card number**, and **Operation sum** settings become available.

5. If the **snapshots – other** report type is chosen, the **Camera ID** setting becomes available (Fig. 7.4—5). This setting can specify the number of the camera that has snapshots of interest.

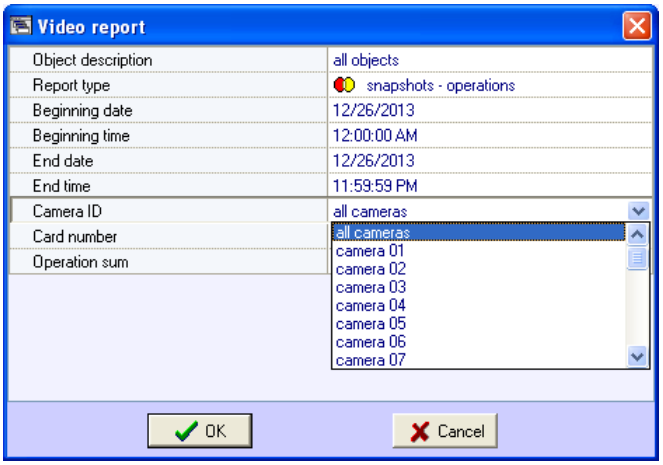


Fig. 7.4—5 Camera ID

After configuring all parameters, click **OK**. A separate window displays the results of search for snapshots for the specified criterion (Fig. 7.4—6).

Fig. 7.4—6 Frames search results

Select a record and click the Report button. A windows opens, containing the report (Fig. 7.4—7).

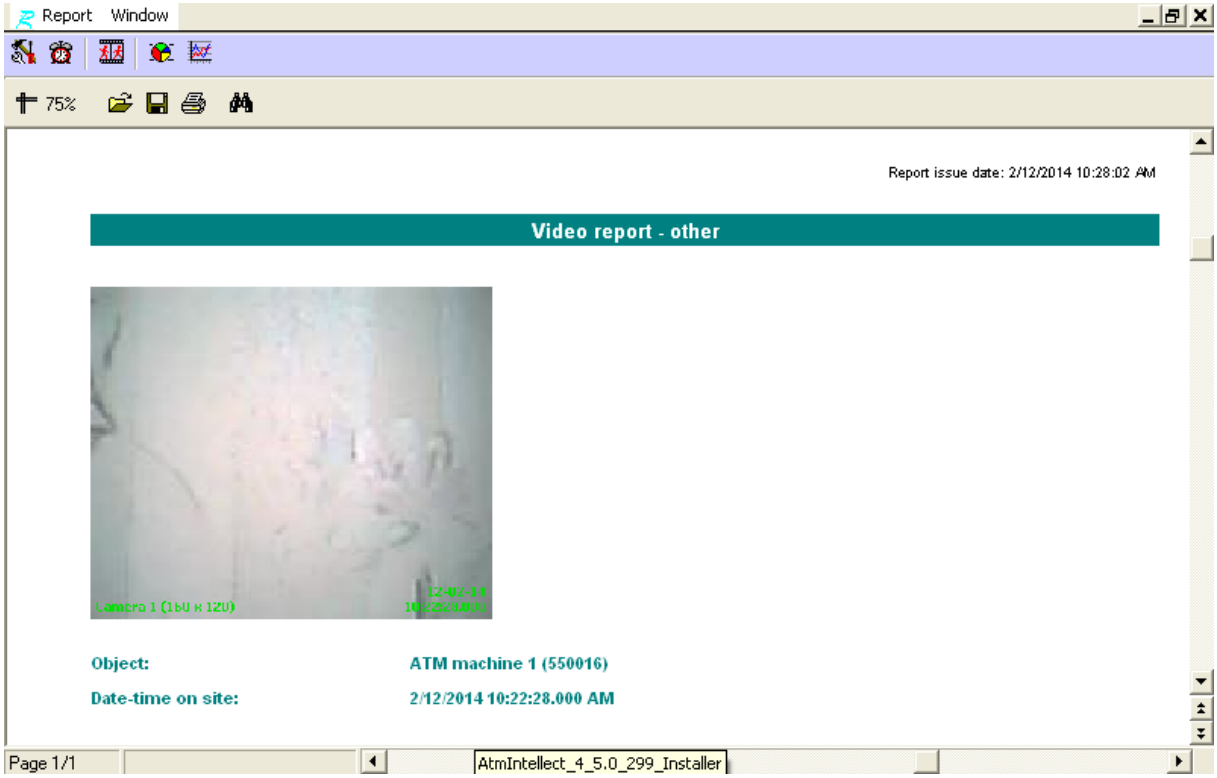


Fig. 7.4—7 Video report

Based on the results of video fragment search, you can select any entry and view the fragment by clicking the **View** button (Fig. 7.4—8). The video fragment will be played back in Axxon Player.

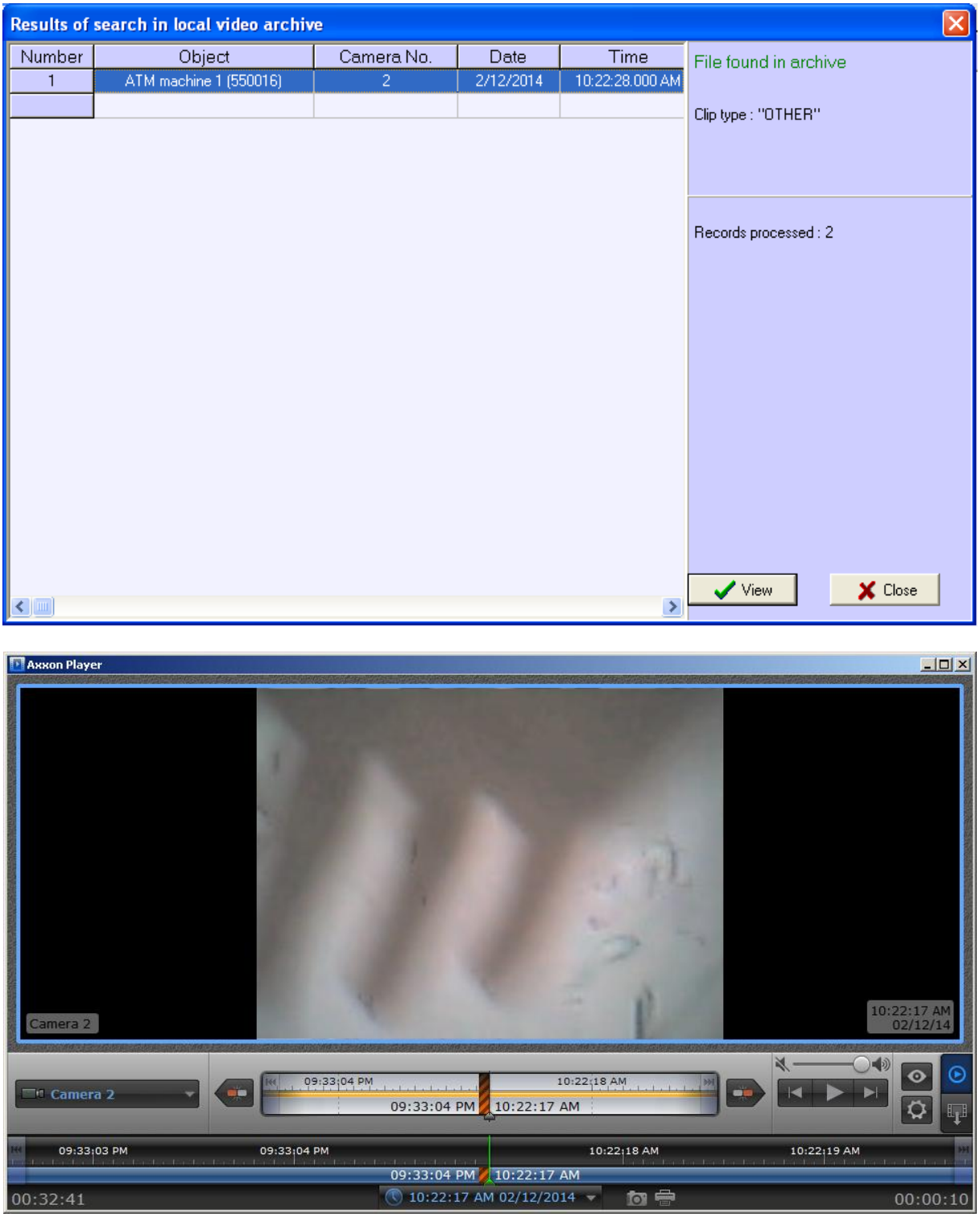


Fig. 7.4—8 Opening video file

Note that searching for frames and fragments is limited to the files that have been loaded by the Search in archive component. This search is performed based on archive time, not the time at which the files were downloaded to the computer.

7.5 Statistical report

To start generating the report, click the Statistics button (Fig. 7.5—1).

Fig. 7.5—1 Statistics button

A dialog box then appears, with the parameters necessary for report generation (Fig. 7.5—2).

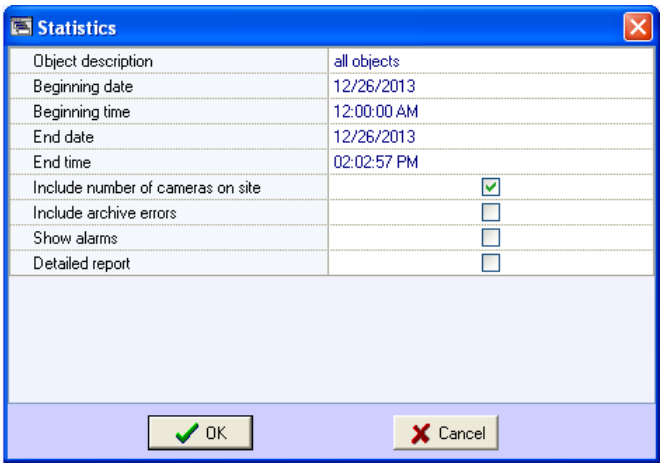


Fig. 7.5—2 Statistics

This dialog box allows setting the following report parameters:

1. Time period for the report Use the Beginning date, Beginning time, End date, and End time parameters for this.
2. Object description (Fig. 7.5—3). This setting allows switching between the two report modes:

   2.1. Report on all system objects

   2.2. Report on one system object

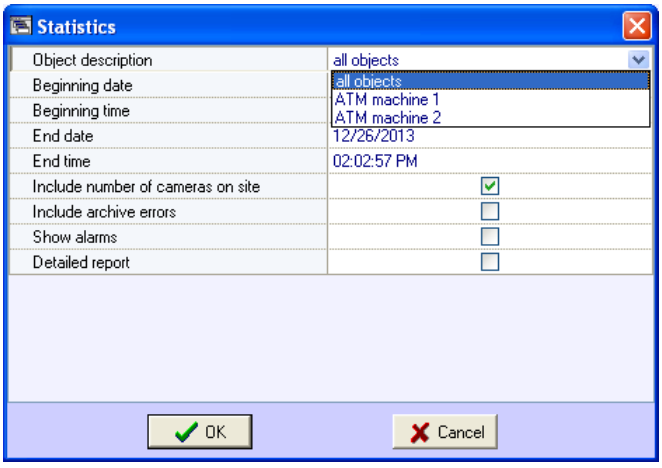


Fig. 7.5—3 Object selection

3. Include number of cameras on object. If this option is selected, calculation of unavailability factor for cameras and archives is performed based on the total number of cameras at the object.

4. Include archive errors. If this option is selected, the calculation of unavailability factor for archives is performed based on the availability factor for the whole system.

5. Show alarms. If this option is selected, information about alarm situations at system objects is added to the report.

6. If the all objects value is chosen for the Object description setting, the Detailed report setting becomes available. If this option is disabled, a system-wide statistical report is generated.

7. If the **Detailed report** option is enabled(Fig. 7.5—4), the Sorting, Sort, and Availability factor threshold settings become available for editing. A detailed system-wide statistical report is generated.

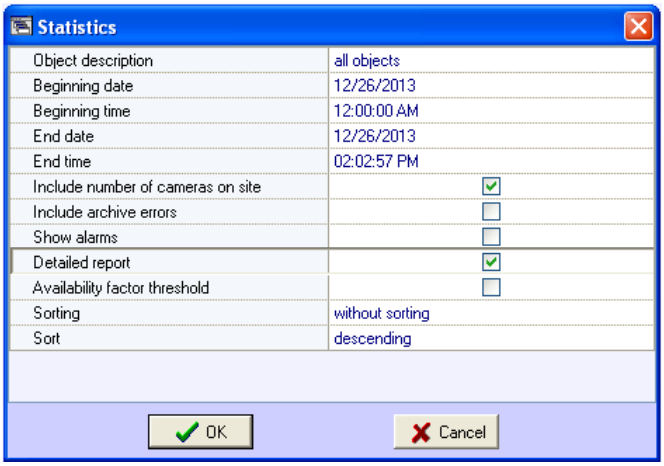


Fig. 7.5—4 Detailed report option enabled

8. Sorting (Fig. 7.5—5). This setting allows sorting data based on a defined criterion.

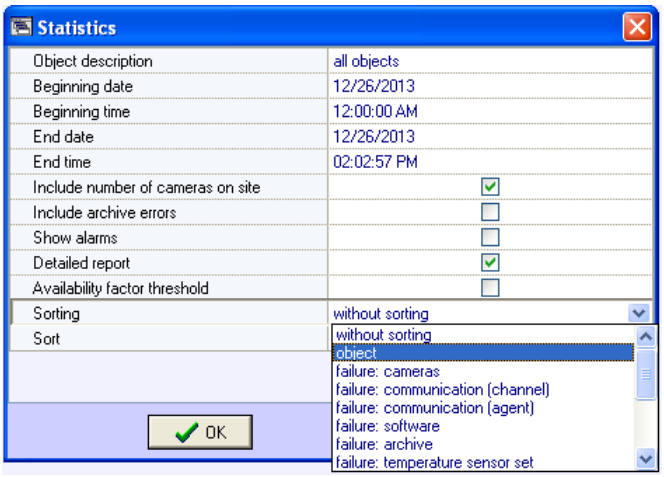


Fig. 7.5—5 Sorting criteria

9. Sort (Fig. 7.5—6). This setting allows determining the direction of sorting: from high to low or from low to high.

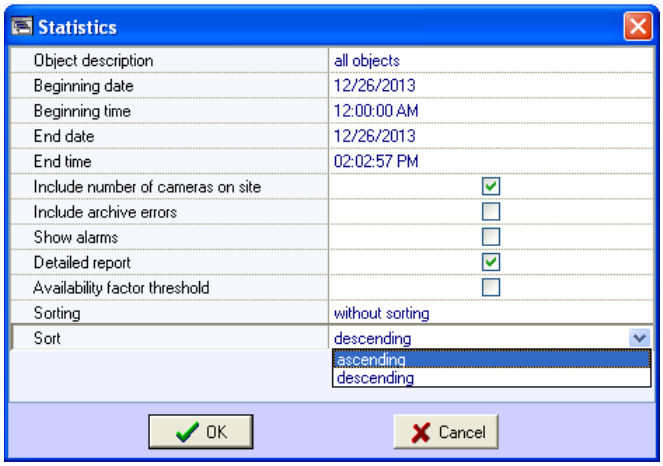


Fig. 7.5—6 Sorting type

10. If the Availability factor threshold option is enabled (Fig. 7.5—7), the Threshold value, % and Condition parameters become available for editing. These settings allow filtering objects by an additional condition: the availability factor threshold value.

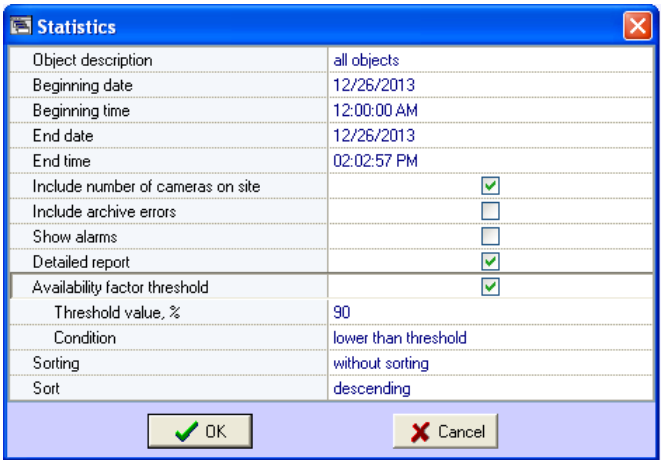


Fig. 7.5—7 Availability factor threshold option

11. Threshold value, %. Indicates the threshold level, from 0 to 100.

12. Condition. This parameter allows specifying a condition for filtering objects: less than threshold or greater than threshold.

13. If a specific object is chosen as the Object description parameter, the Provide info about alarms and Provide info about failures parameters become available for editing (Fig. 7.5—8). This allows including detailed information about faults and alarms at the object in the statistical report for the object.

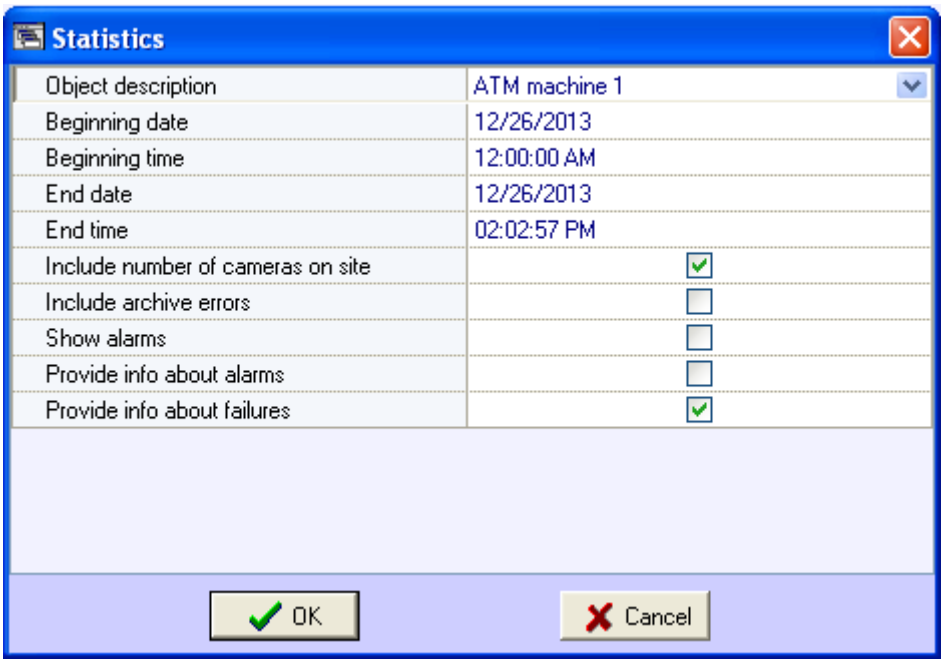


Fig. 7.5—8 Detailed information settings

After configuring all parameters, click **OK**.

A sample report for a single object is shown in Fig. 7.5—9.

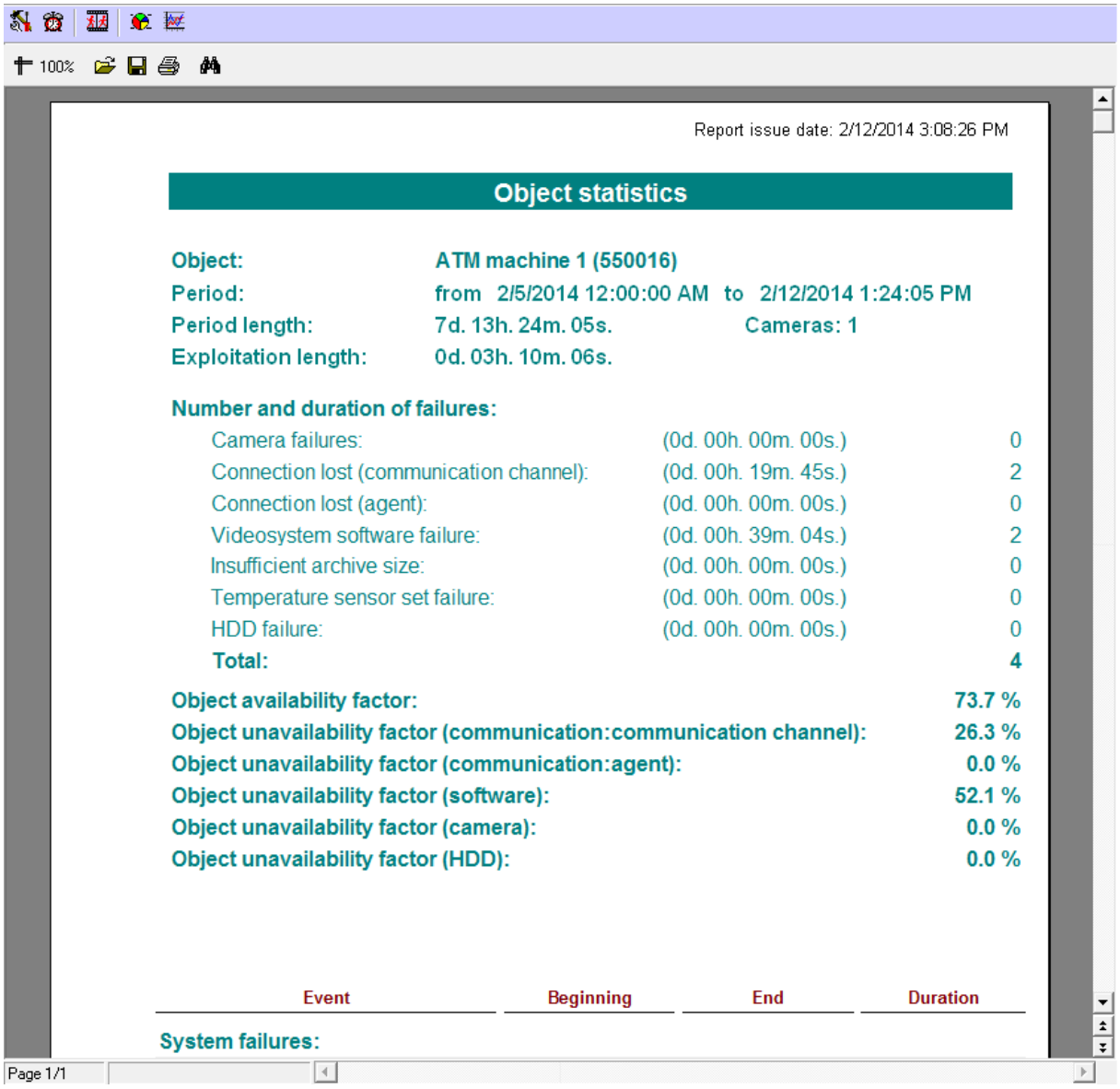


Fig. 7.5—9 A sample report for a single object

Fig. 7.5—10 gives an example with various faults at the object; an availability factor and unavailability factors are given below.

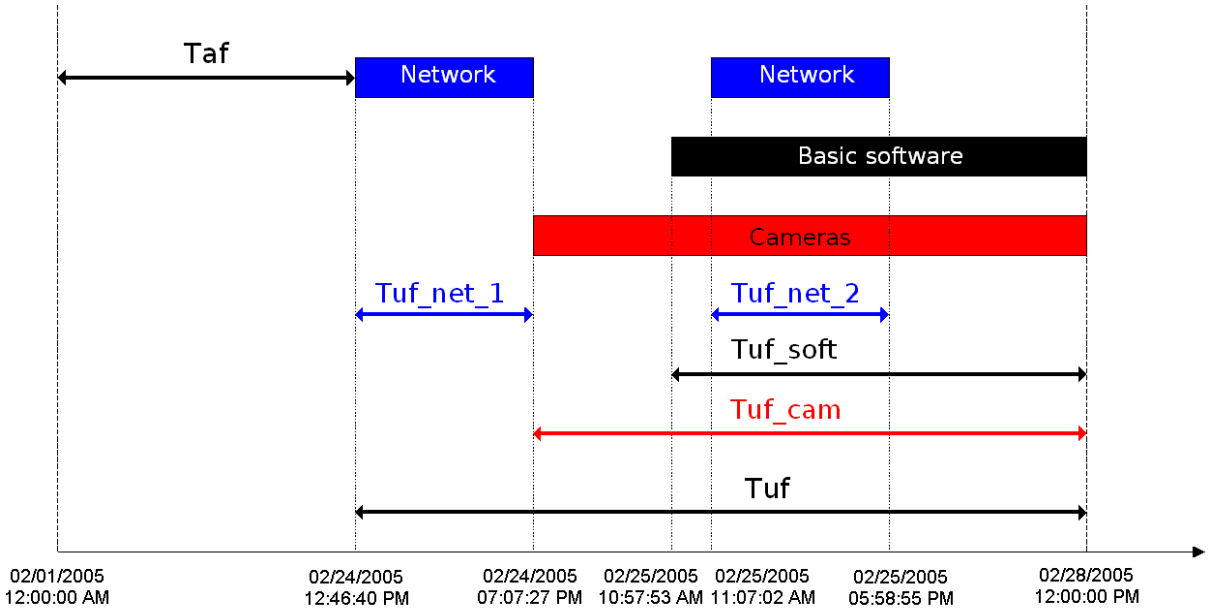


Fig. 7.5—10 An example with various faults at the object

In this example for generating a statistical report, the time period 02/01/2005 12:00:00 AM to 02/28/2005 12:00:00 AM is used. The availability factor of an object is calculated as the ratio of object availability to the overall time period in the report in question.

AF = Taf/(Taf+Tuf)

The following significant malfunctions are included in the calculation:

- Network
- Basic software
- Cameras

The unavailability factors of an object for these malfunctions in the example here are calculated as follows:

Object unavailability factor (network):

UF_net = (Tuf_net_1 + Tuf_net_2)/(Taf+Tuf)

Object unavailability factor (software): UF_soft = Tuf_soft/Taf+Tuf

Object unavailability factor (cameras): UF_cam = Tuf_cam/Taf+Tuf

Note that generally in the model used, the total object availability factor will not equal the sum of the unavailability factors for specific malfunction types.

A sample overall report for the entire system is shown in Fig. 7.5—11. The availability and unavailability factors in the report are calculated by arithmetic averaging.

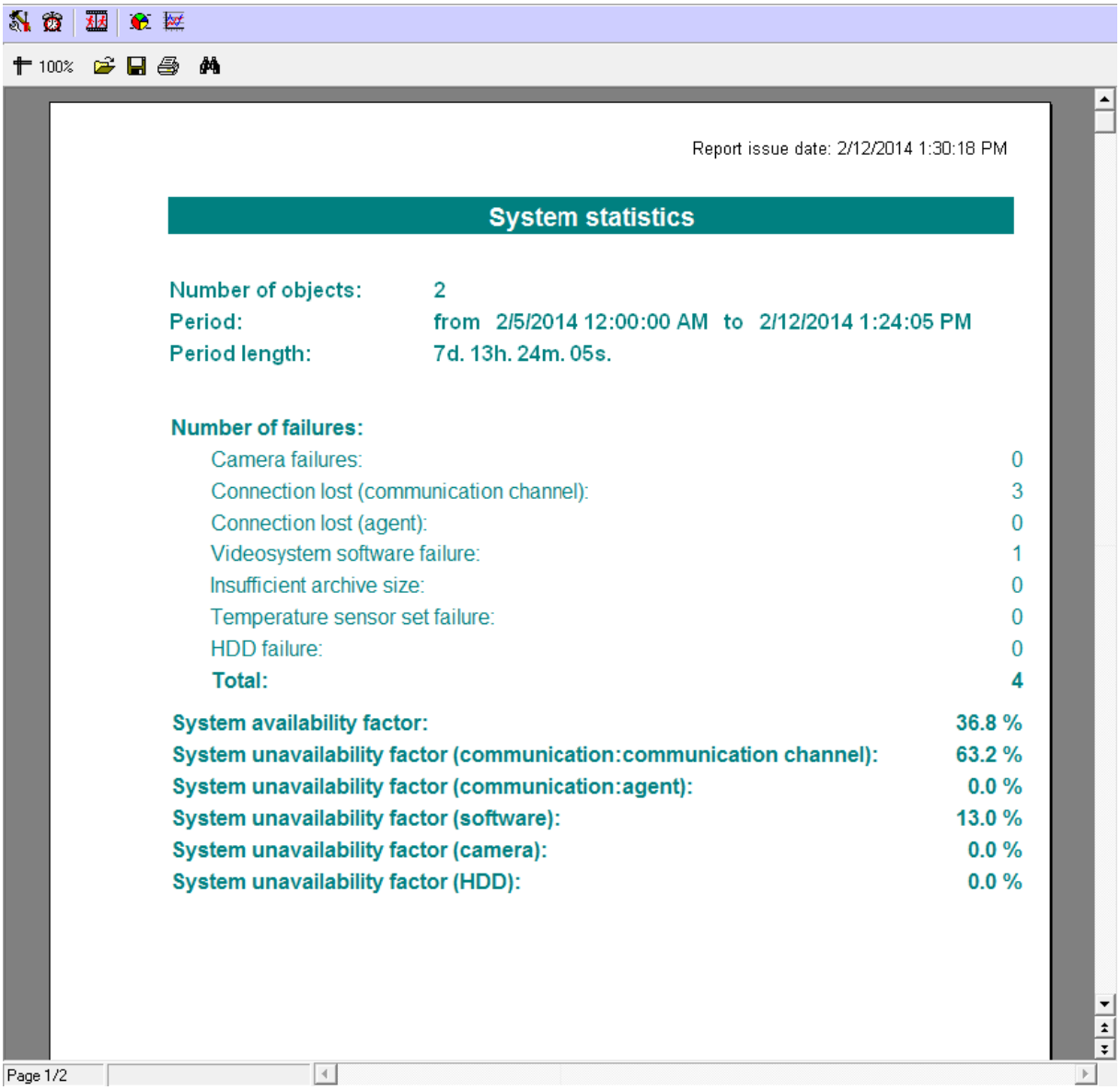


Fig. 7.5—11 Overall report for the entire system

When generating a detailed report for the entire system, besides the page with general information (Fig. 7.5—11), a table with detailed data for each object is displayed (Fig. 7.5—12).

Object	Number of failures							Kg, %	UF_com (chan.), %	UF_com (agent), %	UF_sw, %	UF_cam, %	UF_hdd, %
	Cameras	Com. (chan.)	Com. (agent)	Software	Archive	Temp. sens. set	HDD						
ATM machine 1	0	2	0	1	0	0	0	73.7	26.3	0	26	0	0
ATM machine 2	0	1	0	0	0	0	0	0	100	0	0	0	0

Fig. 7.5—12 Detailed data for each object

When generating a detailed report for the entire system, if the **Availability factor threshold** option is selected, the first page will look as shown in Fig. 7.5—13.

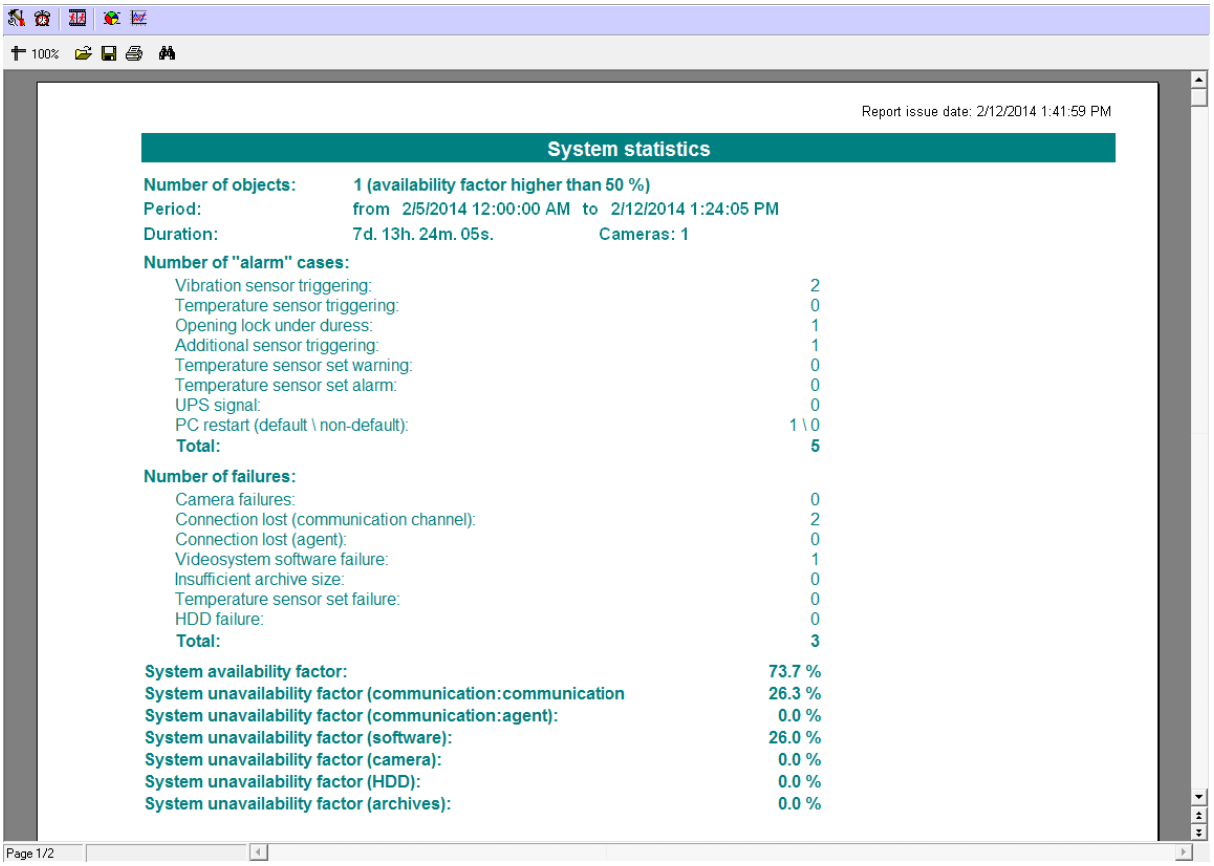


Fig. 7.5—13 Detailed report for the entire system

Attention! While creating the statistical report by all objects in case of the number of failures for the specified period exceeds 1000 for some object, this object eliminates from the statistical report.

7.6 Statistical report by owner

This report includes only objects that have a non-blank **Owner** field in the Monitoring objects reference (see *Reference information*). To start generating the report, click the Statistics by owner button (Fig. 7.6—1).

Fig. 7.6—1 Statistics by owner button

A dialog box then appears, with the parameters necessary for report generation (Fig. 7.6—2).

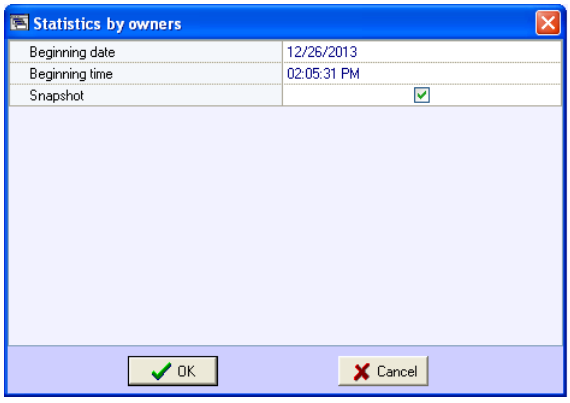


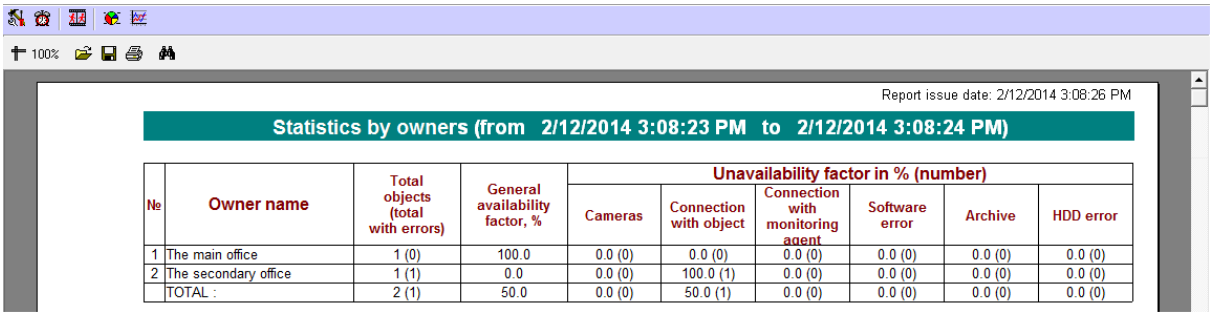
Fig. 7.6—2 Statistics by owners

This dialog box allows setting the following report parameters:

1. Time period for the report The Beginning date and Beginning time settings are used to set the period.

2. Snapshot. If this option is selected, a report as of a selected date and time is generated. Otherwise, a report is generated for the entire day specified in the Beginning date field.

An example of generating this report is shown in Fig. 7.6—3.



№	Owner name	Total objects (total with errors)	General availability factor, %	Unavailability factor in % (number)					
				Cameras	Connection with object	Connection with monitoring agent	Software error	Archive	HDD error
1	The main office	1 (0)	100.0	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
2	The secondary office	1 (1)	0.0	0.0 (0)	100.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
	TOTAL :	2 (1)	50.0	0.0 (0)	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)

Fig. 7.6—3 Statistics by owners report

8 Monitoring unadded objects

If an object tries to connect but has not been added in the oblect settings in *ATM Intellect Workstation* (the **Hardware** tab in *Intellect*), a dialog box (Fig. 7.6—1) opens, with a warning to the operator that there is an unadded object.

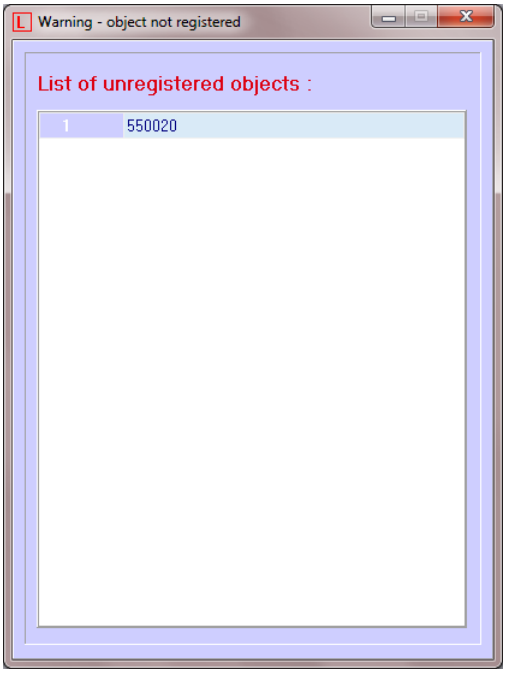


Fig. 7.6—1 List of unregistered objects

9 Appendix 1. Data update periods summary

9.1 Data loading from database to the interface objects

Information on Control panel and Log panel is updated every time data is loaded **from** the database. The time of the last download from the database is shown in the CDT field.

Periods of data updating are different for Control panel and Log panel:

1. Control panel.
   1.1. Data are updated from the database once a minute (by timer).
   1.2. At receiving of a command from Data loader to forcibly update information, which can appear after a new load to the database.
2. Log panel. Data are updated from the database once a minute (by timer).

To get the latest database information, click the button (Refresh data). This forces the data to load.

9.2 Data loading to the database

The date of last load of data **to** the database (see section *Alarm list navigation*) is refreshed when changes in the database appear.

If there is no any change in the database in 5 minutes, the CDT field is forcibly updated and then is updated once a minute. At the same time there will be a gap from the current system time by 5 minutes. After coming of new information from any of the *ATM-Intellect Pro*, the CDT become equal to the current system time of the computer.

Loading data to the database is performed by the *Data loader for Monitoring* module.

If files with technical information are received from Agents of Control (e.g. camera enabled), these files are loaded to the database with a period specified while configuring *Data loader* in the **Loading period** parameter (10 seconds by default) If files with information on alarms are received from Agents of Control (e.g. vibration sensor triggered), this information is loaded to the database immediately.

After each load to the database, a message is sent to the **Control panel** interface component to update the information.

If, after receiving files with technical condition, *ATM-Intellect Workstation* determines that object state has not changed, then nothing is loaded to the database. This is why the timer is used to forcibly update interfaces (see section *Data loading from database to the interface objects*).

In the **Alarm date** field in the interface objects, the time of alarm information load to the database after receiving it from the *ATM-Intellect Pro* is displayed, not the time of alarm appearing at the site.

9.3 Sending data from ATM-Intellect Pro to ATM-Intellect Workstation

ATM-Intellect Pro sends to *ATM-Intellect Workstation* packages with its technical condition with a period set while setting the **Partition of Control** object at the *ATM-Intellect Pro* side using the **Ping frequency** parameter (see *ATM-Intellect. Administrator's Guide*, section *Configuring communication between ATM-Intellect Pro and Control Server).* The default ping frequency is 2 minutes (120 seconds).

Information on long-term alarms comes to the *ATM-Intellect Workstation* from *ATM-Intellect Pro* together with the information on technical condition, with the ping period.

Information about short-term alarms comes to the *ATM-Intellect Workstation* immediately after they have appeared at the *ATM-Intellect Pro*.

9.4 Sending data from ATM-Intellect Workstation to ATM-Intellect Workstation TC

If necessary, *ATM-Intellect Workstation* can retranslate technical condition data to the *ATM-Intellect Workstation TC*. Alarms are not transmitted to the *ATM-Intellect Workstation TC* for it is presumed to be installed in facilities of a third party service company which should have access to the information on equipment failures but not to the information on alarms.

After the data have been received by Data loader for monitoring at the ATM-Intellect Workstation TC, they are processed similar to the way they are on the ATM-Intellect Workstation – recorded to the database with the loading period and then, by request or by timer, are displayed in the interfaces.

9.5 Data transmission scheme

The picture gives a general scheme of data transferring from the *ATM-Intellect Pro* to the *ATM-Intellect Workstation* (Fig. 9.5—1).

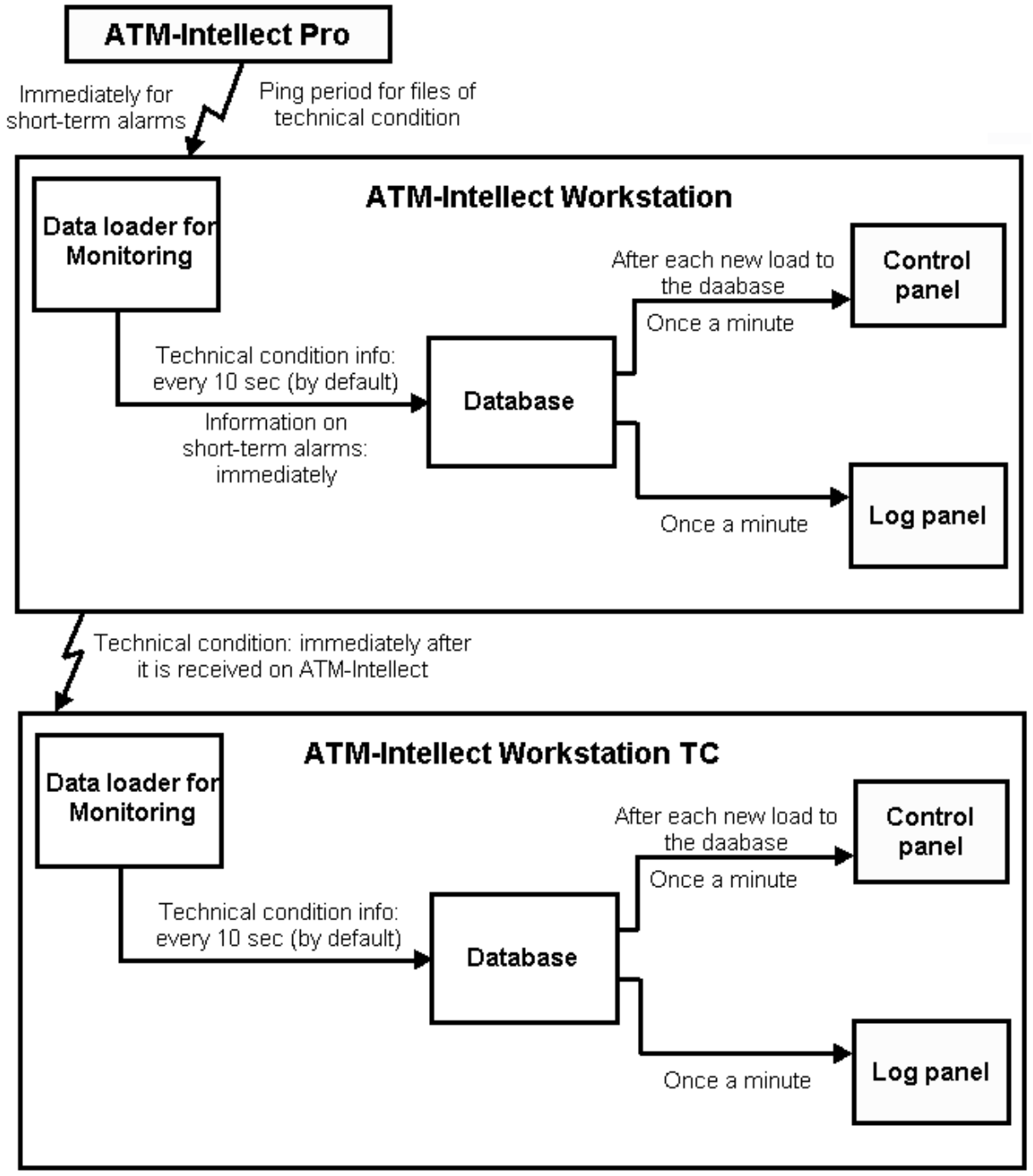


Fig. 9.5—1 Data transferring scheme

9.6 Features of displaying information on short-term and long-term alarms

Information about long-term alarm can be not recorded into the Monitoring database and not displayed in its interfaces in the following cases:

1. If a long-term alarm had started and ended within two polls of *ATM-Intellect Pro* (within the **Ping frequency** interval, see *ATM-Intellect. Administrator's Guide).*

2. If a long-term alarm had started and ended when the connection between *ATM-Intellect Pro* and *ATM-Intellect Workstation* was lost.

When there is no connection with *ATM-Intellect Workstation*, the short-term alarms are stored in the "holding" data files on the *ATM-Intellect Pro*. When connection with *ATM-Intellect Workstation* is restored, they are transferred to the *ATM-Intellect Workstation*, stored in the Monitoring database and displayed in its interfaces.

9.7 ATM-Intellect Pro technical condition data collection periods

ATM-Intellect Pro technical condition data collection periods are given below:

1. Information on disk failures (the Disk failure alarm type) and its re storing is updated every 15 minutes.
2. Information on the computer normal and abnormal restarts is displayed in the interface in 5 minutes.
3. Information on free disk space is updated every 1 hour.
4. *ATM-Intellect Pro* initiates the connection with *ATM-Intellect Workstation* and once in a ping period (2 minutes by default) sends a package with technical data to the *ATM-Intellect Workstation*. If *ATM-Intellect Workstation* haven't been receiving any data from *ATM-Intellect Pro* within 6 minutes, the "No connection" error is displayed for such object.