

AxxonSoft

# Face Intellect Software Package

Operator's Guide

Version 1.0.2

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## **1 Terms and definitions**

1. The Guide – this document, titled “Face Intellect Software Package: Operator’s Guide”.
2. The Software - Face Intellect software package.
3. DB – face database used for face recognition, also referred to as the Face Recognition Database.

## **2 Introduction**

### **2.1 The purpose and structure of the Guide**

This Guide is an informational reference designed for users of the Face Intellect software package with “Operator” access rights.

The Guide contains the following material:

1. General description of the Face Intellect software package;
2. Face Intellect software operation;
3. Description of the Face Intellect user interface.

### **2.2 Purpose of Face Intellect software**

Face Intellect software is designed for automated identification of people by comparing a face displayed on a surveillance video frame with reference images for which a Face Recognition Database contains information.

Face Intellect software provides the following functional capabilities:

1. recognizes human faces in a video frame;
2. registers facial biometric parameters;
3. compares a face displayed in a video frame with reference images stored within the "<Face Intellect installation directory\Bmp\person>" folder based on biometric parameters;
4. maintain a database of recognized faces;
5. creates a photo- and video archive.

### **2.3 Recommendations for using the Face Intellect software package**

Face Intellect software is installed as an extension to the Intellect software package.

The following is recommended for correct application of Face Intellect software:

1. carefully follow instructions;
2. use the Software only for its intended purpose;
3. do not use third party software on computers installed with Face Intellect unless the software is a component of the Face Intellect software package.

### **3 General description of the Face Intellect software package**

#### **3.1 Structure of the Face Intellect software package**

Face Intellect software includes the base version of the Intellect software package and additional software modules that directly perform face recognition functions.

Face Intellect includes the following software modules:

1. Face recognition server;
2. Face detector.

#### **3.2 Functionality of the Face Recognition Server module**

The Face Recognition Server software module is designed to perform the following functions:

1. record a frame displaying a detected face;
2. register biometric parameters of the detected face;
3. recognize detected faces;
4. maintain a database of recognized faces;
5. keep statistics.

#### **3.3 Functionality of the Face Detector software module**

The Face Detector software module is designed to perform face detection functions in video frames.

## 4 Face Intellect software operation

### 4.1 Launch and shutdown of the Software

Before beginning work with the Software, it is recommended to check the operability of all system components: connections, video cameras, etc.

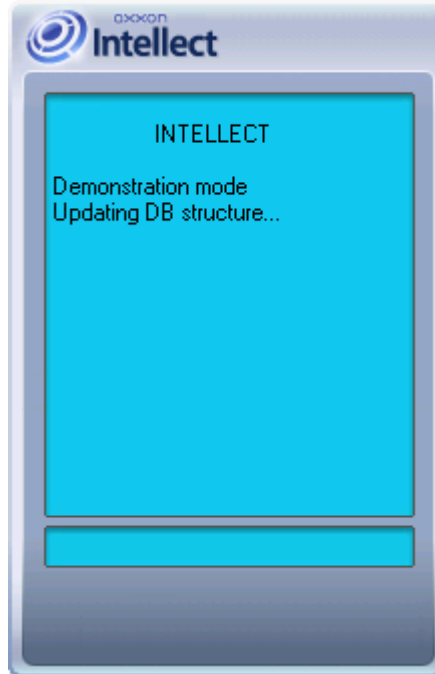



Fig. 4.1-1 Launching the Software

The Software can be launched in the following two ways (see Fig. 4.1-1):

1. Automatically. The software starts automatically after the operating system loads.
2. Manually. To start the Software manually, in the Start menu, select Programs, then Intellect, then Client Workstation, or use the corresponding shortcut on the Desktop.

Software startup may be password protected. In this case, enter your password to start the Software.

To shut down the Software, perform the following steps:

1. point the mouse cursor to the upper right corner of the screen. The program's main control panel will then appear;
2. click the  icon on the program's control panel;
3. select "Shutdown" in the menu that opens.

Program shutdown will begin, and a password will be required if one is set (see Fig. 4.1-2).

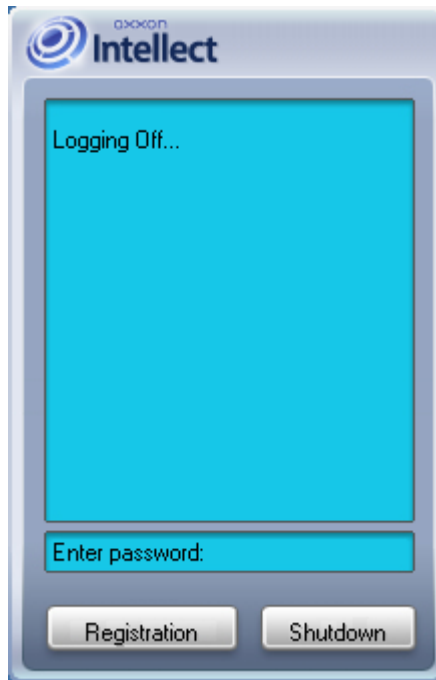


Fig. 4.1-2 Software shutdown secured by a password request

*NOTE. The Software can be configured to forbid shutdown. In that case, the Shutdown option will not be displayed in the menu.*

## 4.2 Using the Face Monitor interface object

### 4.2.1 Face detection

#### 4.2.1.1 Starting and stopping the face detection process

Starting and stopping the face detection process is done with the "Start" ("Pause") button on the face recognition panel (see Fig. 4.2-1 and Fig. 4.2-2).

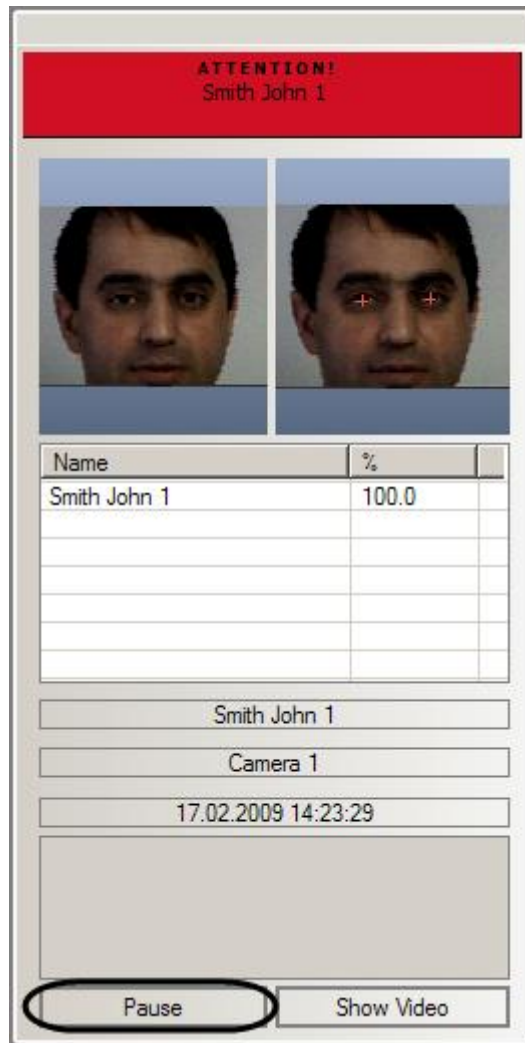


Fig. 4.2-1 Face recognition panel (face detection is activated)

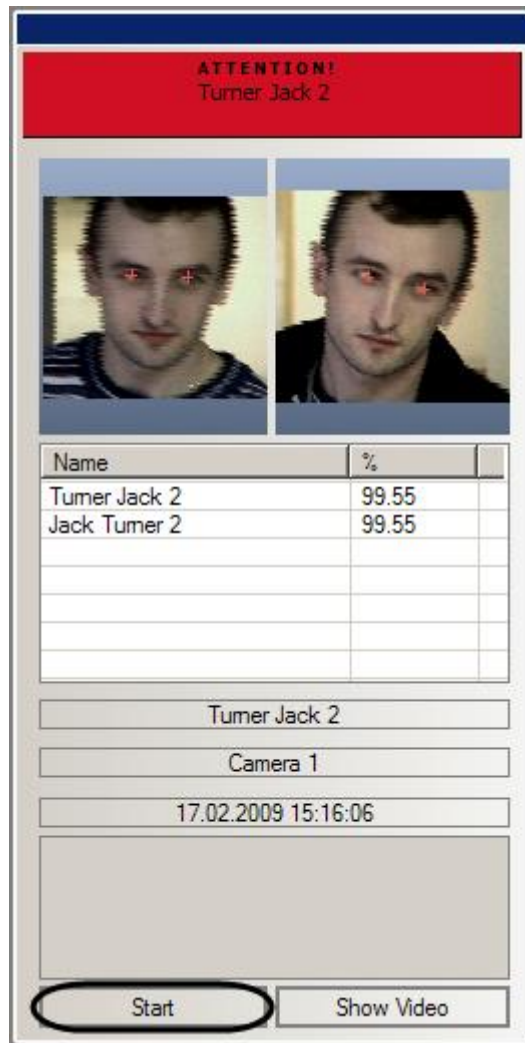


Fig. 4.2-2 Face recognition panel (face detection has been stopped)

#### 4.2.1.2 Registering detected faces

If the face detection process has been launched, then images of detected faces are added to the Detected Faces Viewer (see Fig. 4.2-3).



Fig. 4.2-3 Detected Faces Viewer

For each detected face, the viewer will contain a photo and text information containing the number of the detection camera and the time the face was detected in the HOURS:MINUTES:SECONDS format. If a detected face is recognized by the Software, then the surname of the corresponding person in the Face Recognition Database is added to the information field of the recognized face (see Fig. 4.2-4).

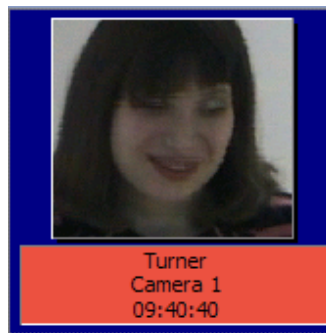


Fig. 4.2-4 Information field and photo of a detected face

The color of the information field represents the level of resemblance, or match percentage of the detected face with its best match in the Face Recognition Database (see Table 4.2-1).

*NOTE. Match percentage boundaries are set when configuring the Software (see the document titled "Face Intellect Software Package: Administrator's Guide").*

Table 4.2-1

Color of information field	Match percentage
----------------------------	------------------

Color of information field	Match percentage
Green	Low
Yellow	Moderate
Red	High

After clicking on the photo or the information field of the detected face, the lower part of the Detected Faces Viewer window displays all video frames used in the process of detecting the given face. Each image is shown with a timestamp in HOURS:MINUTES:SECONDS:MILLISECONDS format (see Fig. 4.2-5).



Fig. 4.2-5 Video frames of a detected face

## 4.2.2 Face recognition

### 4.2.2.1 Starting and stopping the face recognition process

Starting and stopping of the face recognition process is done automatically; it is synchronized with the starting and stopping of face detection (see the “Starting and stopping the face detection process” section).

### 4.2.2.2 Displaying data on a recognized face

If a detected face is recognized, then data on its similarity to faces in the Face Recognition Database is displayed in the face recognition panel (see Fig. 4.2-6).



Fig. 4.2-6 Data display for a recognized face

The middle part of the panel displays a table containing a list of faces from the Face Recognition Database that closely match the recognized face.

*NOTE. The given table includes persons whose resemblance to the detected face is equal to or exceeds the minimum match percentage (the minimum match percentage is set when configuring the Software - see "Face Intellect Software Package: Administrator's Guide").*

Within the table, each face includes the surname, initials and match percentage with the recognized face. The recognized face is identified by the Software based on the identity of the face from the DB that best matches the recognized face.

The upper part of the face recognition panel window contains the surname and initials of the recognized person (blinking text field), an image of the recognized person (on the left) and an image of the matching face from the DB (on the right). The lower part of the panel contains the surname and initials of the recognized face, the number of the detection camera, and the data and time of detection.

#### 4.2.2.3 Adding detected faces to the Face Recognition Database

If the detected face is not in the Face Recognition Database but the person is known, then the detected face may be added to the DB as a reference image.

To add a detected face to the Face Recognition Database, the following steps must be performed:

1. select the face in the Detected Faces Viewer;
2. select a suitable video frame for the given face in the lower part of the Detected Faces Viewer;
3. click the “Add” button in the upper part of the Detected Faces Viewer or double-click on the selected video frame;
4. input the necessary parameters into the dialog box that appears (the Face Recognition Database control panel) and add the face to the Face Recognition Database (see the “Adding photos to the Face Recognition Database” section).

### 4.2.3 Face Recognition Database operation

#### 4.2.3.1 Access to the Face Recognition Database

Access to the Face Recognition Database is provided through the Face Recognition Database control panel. To display the Face Recognition Database control panel, click the “Add” button in the upper part of the event viewer (see Fig. 4.2-7).



Fig. 4.2-7 Accessing the Face Recognition Database

After clicking "Add", the Face Recognition Database control panel will appear (see Fig. 4.2-8).

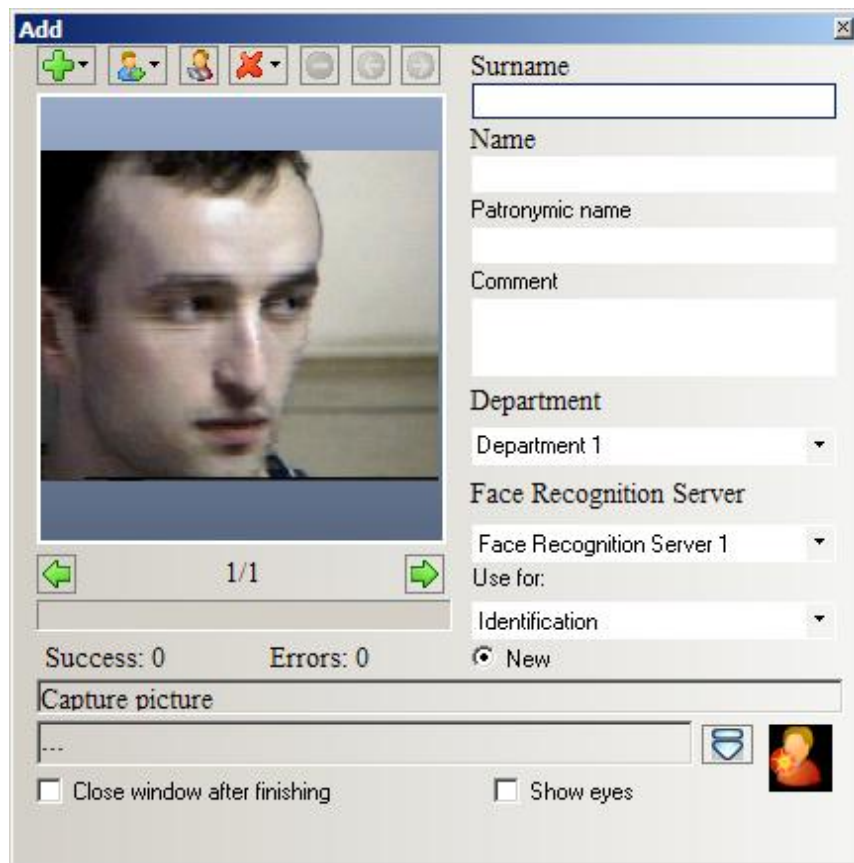




Fig. 4.2-8 Face Recognition Database control panel

#### 4.2.3.2 Browsing through photos

Loaded photos can be browsed using the «» and «» buttons in the Face Recognition DB control panel (see Fig. 4.2-9).

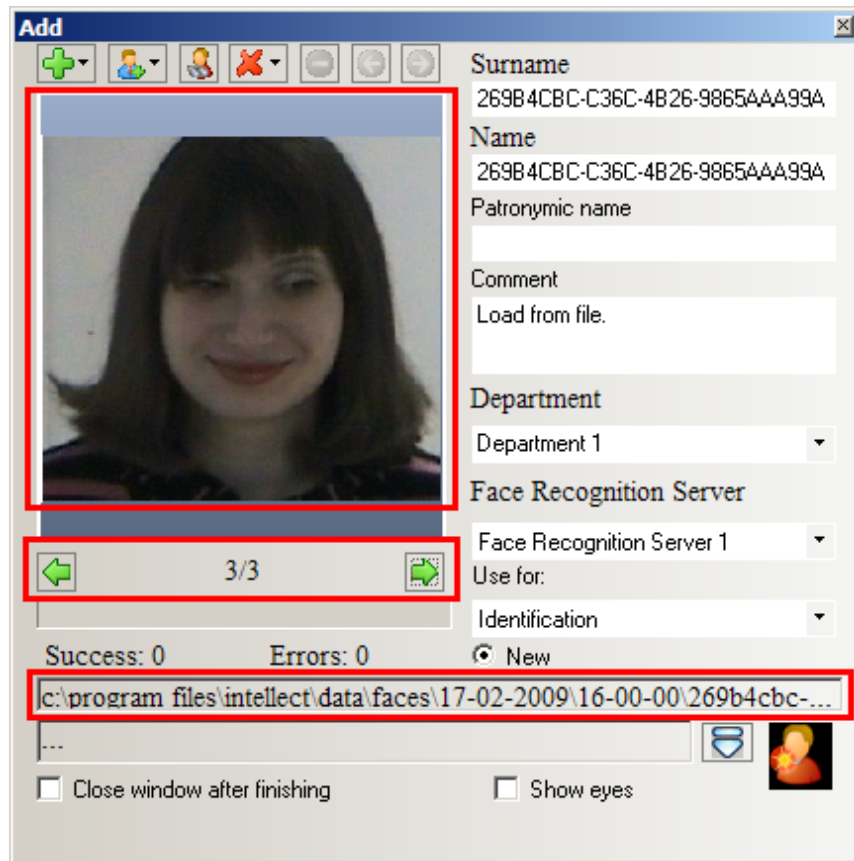






Fig. 4.2-9 Browsing through photos

The index number of the selected photo is displayed between the «  » (previous photo) and «  » (next photo) buttons and the full filename of the selected loaded photo is displayed in the lower part of the Face Recognition DB control panel.

*NOTE. The term "loaded photo" refers to a photo in the Face Recognition DB control panel that may or may not be in the Face Recognition DB. The term "selected loaded photo" refers to the photo currently displayed in the Face Recognition DB control panel.*

The «  » (previous photo) and «  » (next photo) buttons are used for browsing photos that were not added to the database due to some kind of error (for example, a "License limit exceeded" error (see Fig. 4.2-10)).

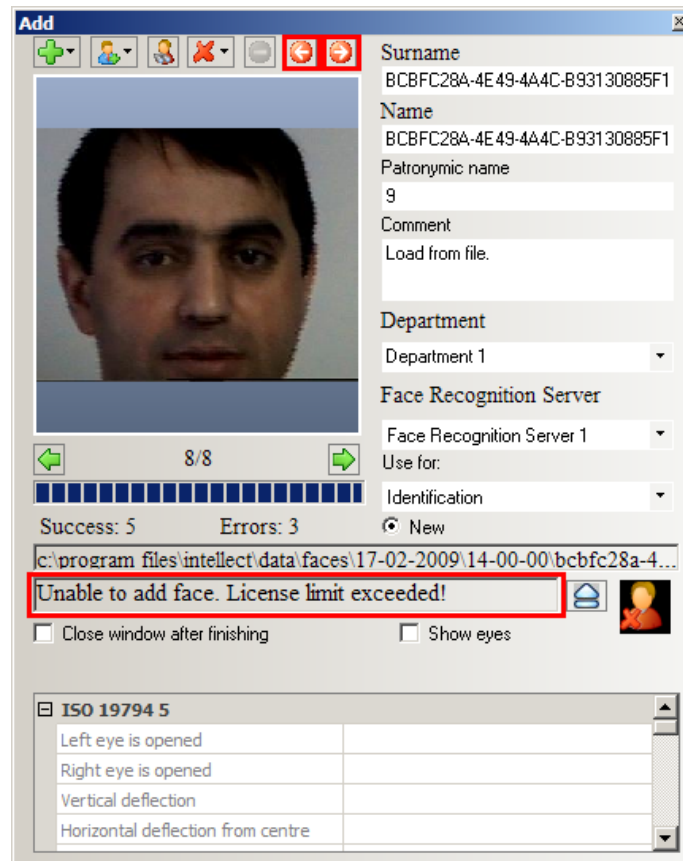



Fig. 4.2-10 Browsing photos that were not added due to a "License limit exceeded" error

#### 4.2.3.3 Adding photos to the Face Recognition Database

Addition of photos for face recognition is done via the «  » menu (see Fig. 4.2-11).

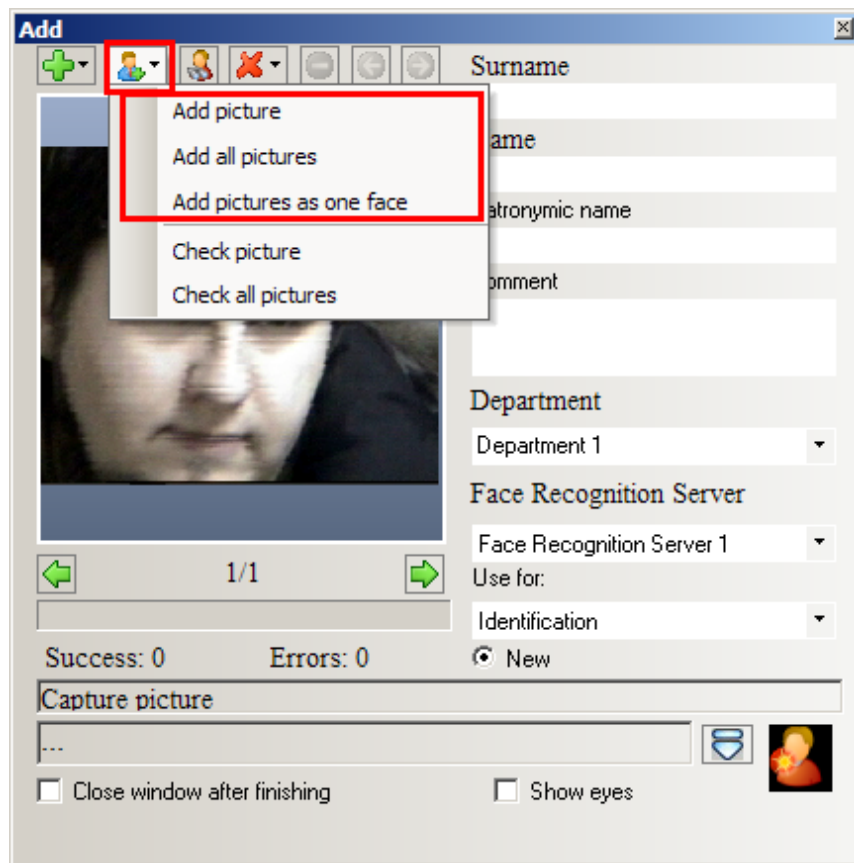



Fig. 4.2-11 Adding photos (menu)

The «» menu contains the following options for adding photos:


1. Add photo – the selected loaded photo is added to the newly created person;
2. Add all photos – sequential addition of all loaded photos to the newly created persons (for each loaded photo, a new person is automatically created and the personal data of the created person is generated according to the filename of the loaded photo);
3. Add all photos for one person – all loaded photos are added to the created person.

To add a photo to a newly created or existing person, the following steps must be performed:


1. Load (see the “Loading and saving photos” section) or add (see the “Adding detected faces to the Face Recognition Database” section) the necessary photo;
2. When necessary, check the photo for compliance with biometrical standards (see the “Checking photos for compliance with biometric standards” section);
3. Enter the necessary personal data into the “Surname”, “First name”, “Middle name”, “Department” and “Comments” fields;
4. When necessary, specify the recognition server (in the “Face Recognition Server” list) and assign a usage option for the photo of the identified person (“Use for” list);

5. Select the “Add photo” option in the «  » menu.


To add a photo to a newly created (or existing) person, the following steps must be performed:

1. Load (see the “Loading and saving photos” section) the necessary photos;
2. When necessary, check the loaded photos for compliance with biometric standards (see the “Checking photos for compliance with biometric standards” section);
3. When necessary, delete unneeded loaded photos (see the “Removing p” section);
4. Enter the necessary personal data into the “Surname”, “First name”, “Middle name”, “Department” and “Comments” fields;
5. When necessary, specify the recognition server (in the “Face Recognition Server” list) and assign a usage option for the identified person (“Use for” list);
6. Select the “Add all photos for one person” option in the «  » menu.

In order to sequentially add photos to newly created persons, the following actions must be performed:

1. Load (see the “Loading and saving photos” section) the necessary photos;
2. When necessary, check the loaded photos for compliance with biometric standards (see the “Checking photos for compliance with biometric standards” section);
3. When necessary, delete unneeded loaded photos (see the “Removing p” section);
4. When necessary, specify the recognition server (in the “Face Recognition Server” list) and assign a usage option for the identified person (“Use for” list);
5. Select the “Add all photos” option in the «  » menu.

The “Close window after addition” option automatically closes the Face Recognition DB control panel after the selected faces are added.

During all operations, the lower part of the Face Recognition DB control panel will display the status of the operation being performed (see Fig. 4.2-12). Any operation currently in progress can be cancelled at any time by clicking the «  » button (see Fig. 4.2-12).

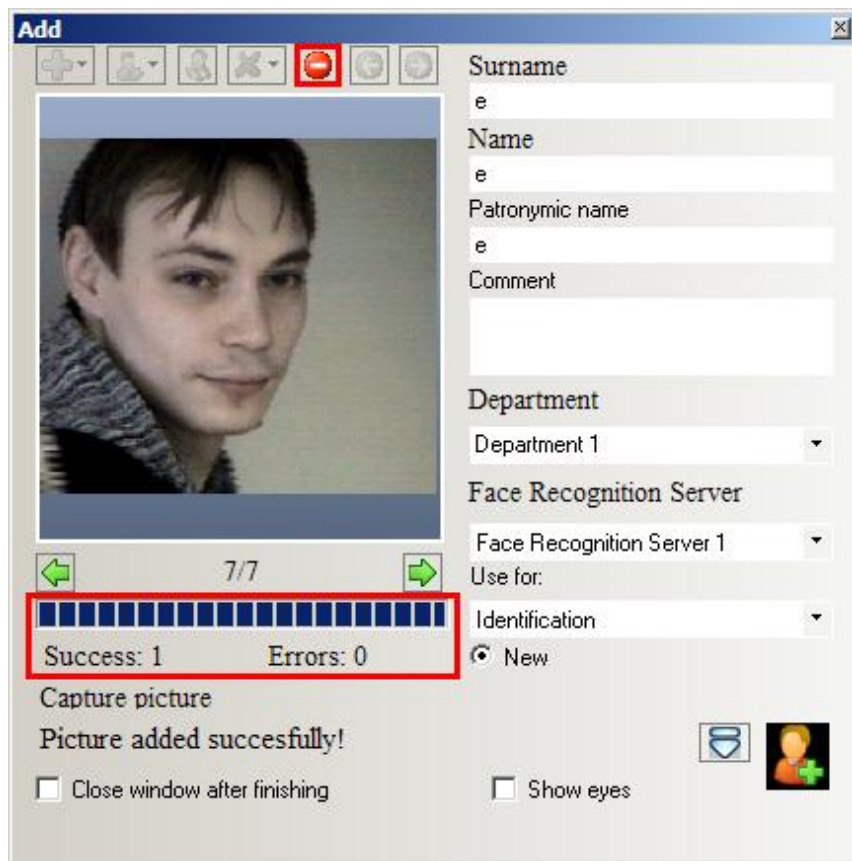



Fig. 4.2-12 Current operation

#### 4.2.3.4 Loading and saving photos

Loading and saving photos is done via the «» menu (see Fig. 4.2-13).

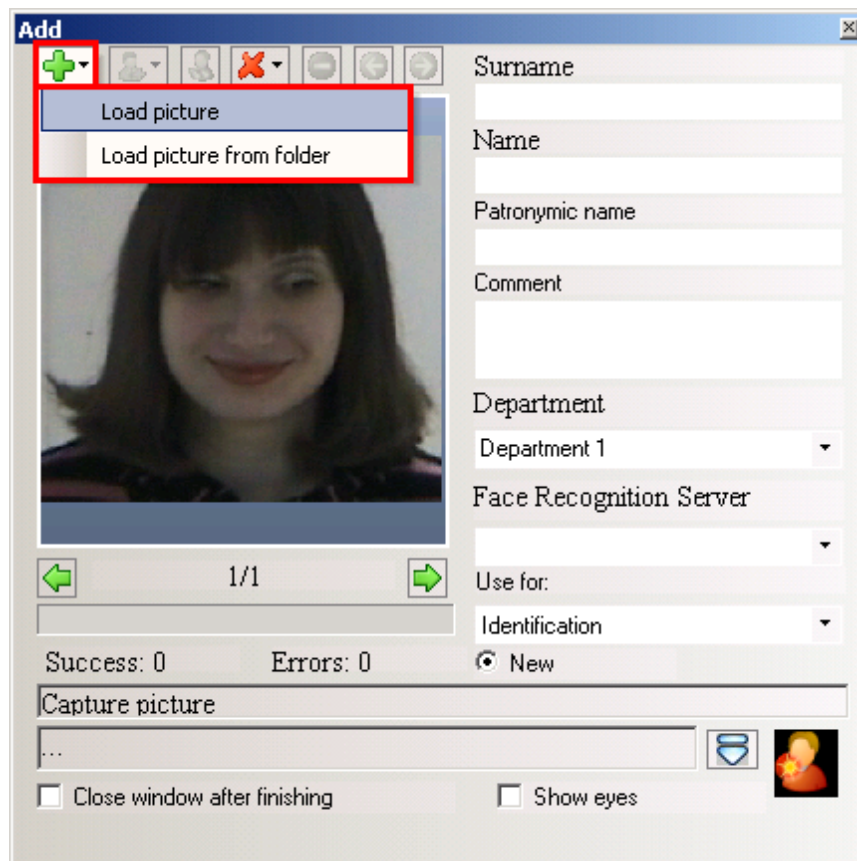



Fig. 4.2-13 Loading and saving photos (menu)

The «» menu contains the following options for loading and saving photos:

1. Load picture – load a specific photo;
2. Load pictures from folder – load photos from a specific folder.

In order to load a photo and create a new person for it, the "Load picture" option should be selected. Indicate the path and filename of the loaded image in the appearing dialog box and click the "Open" button (see Fig. 4.2-14).

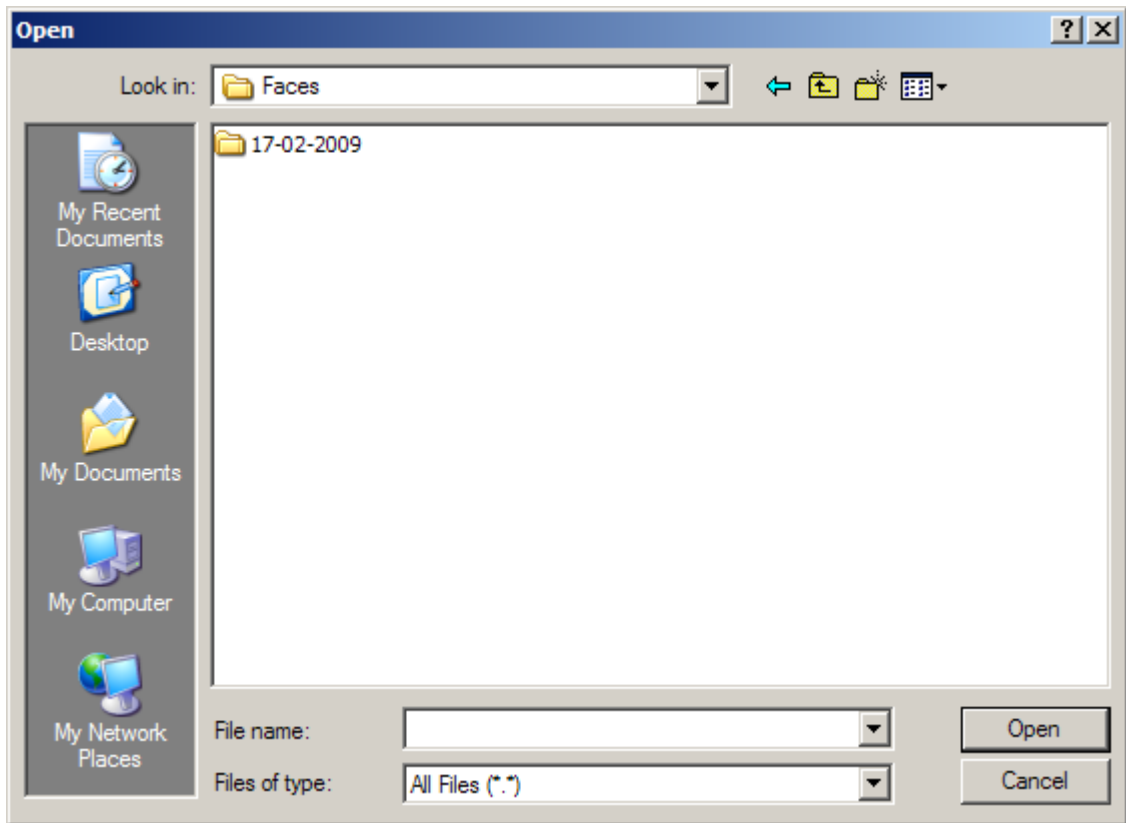


Fig. 4.2-14 Loading a photo

*NOTE. Data for the created person is generated automatically: the values of the "Surname" and "First name" fields are taken from the name of the loaded file and the text in the "Comments" field is set to "Load from file".*

In order to load photos from a specified folder and create a new person for each of them, the "Load photos from folder" option should be selected. Select the necessary folder in the appearing dialog box and click the "Open" button (see Fig. 4.2-15).

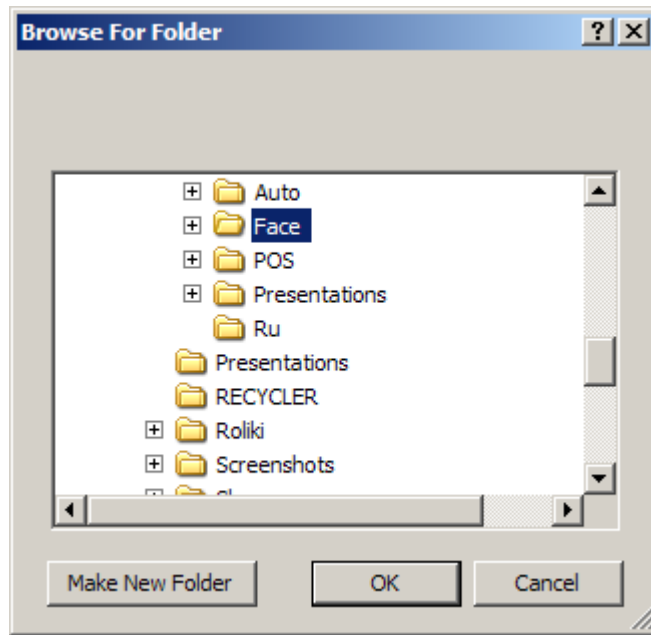


Fig. 4.2-15 Loading photos from a specific folder

*NOTE. Data for each created person is generated automatically: the values of the “Surname” and “First name” fields are taken from the name of the loaded file and the text in the “Comments” field is set to “Load from file”.*

To save the current photo to file, select the “Save photo” option. In the appearing dialog box, indicate the path and filename and select the file format (Windows Bitmap (BMP) or JPEG (JPG)) and then click the "Save" button (see Fig. 4.2-16).

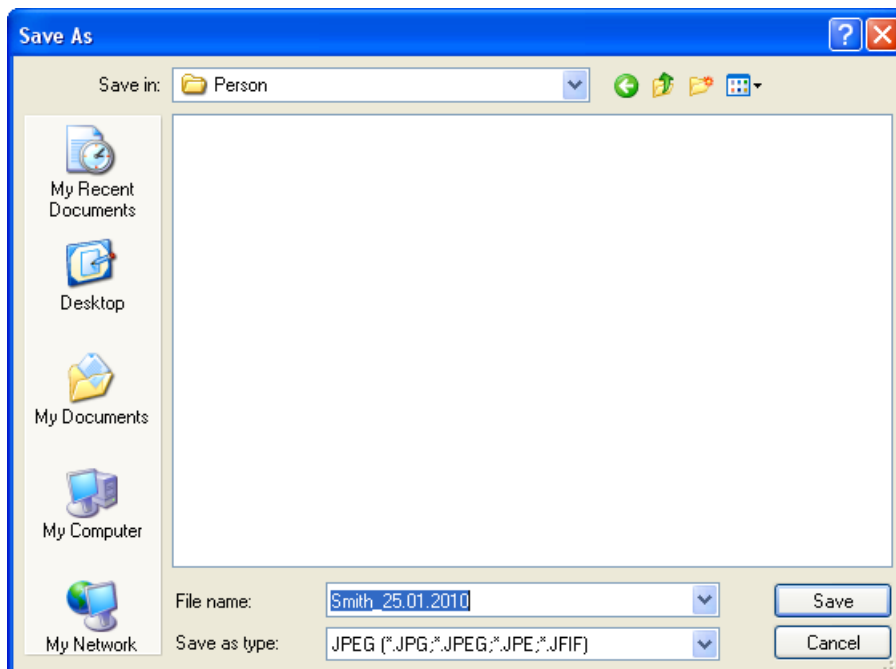



Fig. 4.2-16 Saving a photo

#### 4.2.3.5 Checking photos for compliance with biometric standards

Checking photos for compliance with biometric standards is done through the «  » menu (see Fig. 4.2-17).

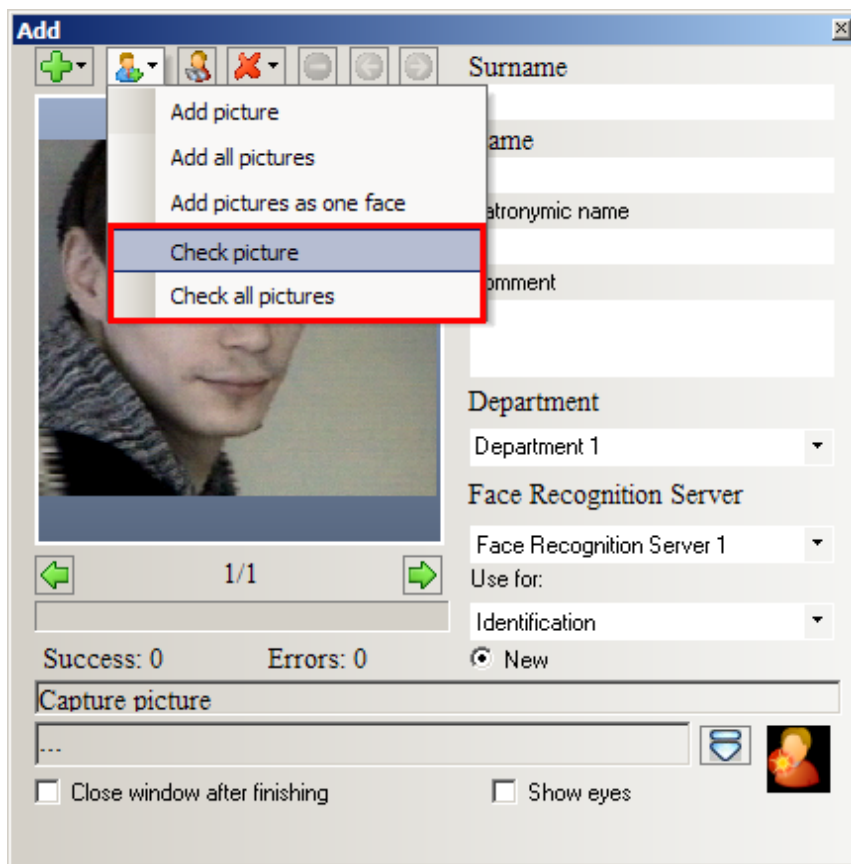




Fig. 4.2-17 Checking photos for compliance with biometric standards (menu)

The «  » menu contains the following options for checking photos for compliance with biometric standards:

1. Check photo – checks the selected loaded photo for compliance with biometric standards;
2. Check all photos – checks all photos for compliance with biometric standards.

In order to check a photo for compliance with biometric standards, the following steps should be performed:

1. Load (see the “Loading and saving photos” section) or add (see the “Adding photos to the Face Recognition Database” section) the necessary photo;
2. Select the “Check photo” option in the «  » menu;
3. A report containing data on the checked photo's compliance with biometric standards will be displayed in the Face Recognition Database control panel (see Fig. 4.2-18).

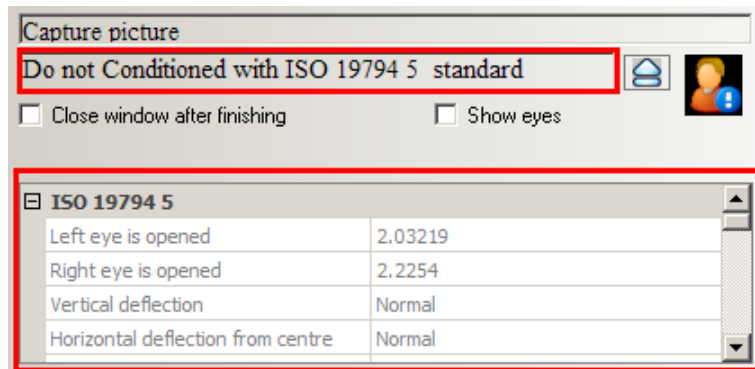



Fig. 4.2-18 Checking photos for compliance with biometric standards (report)

In order to check all loaded photos for compliance with biometric standards, the following steps should be performed:

1. Load (see the "Loading and saving photos" section) the necessary photos;
2. Select the "Check all photos" option in the «  » menu;
3. All loaded photos will be checked, and a report containing data on the checked photo's compliance with biometric standards will be displayed in the Face Recognition Database control panel for each individual photo (see Fig. 4.2-18).

*NOTE. A report will be displayed for each checked photo when they are selected (see the "Browsing through photos" section).*

The "Show eyes" option marks the recognized eyes on the checked photo with « + » (see Fig. 4.2-19).

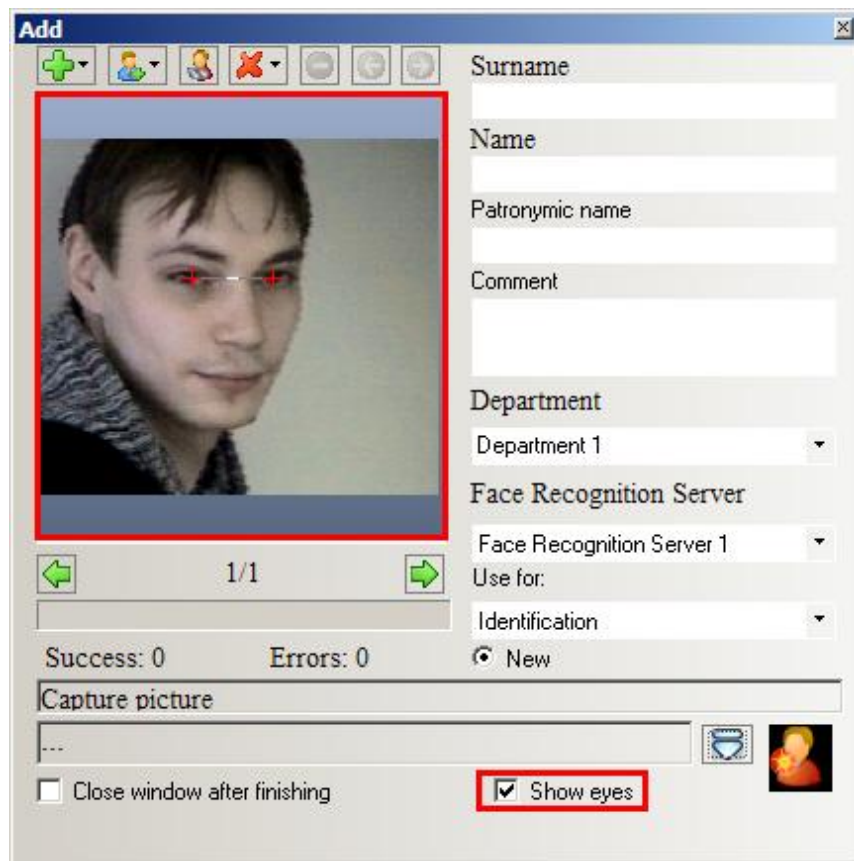



Fig. 4.2-19 "Show eyes" option (activated)

#### 4.2.3.6 Removing photos

Removal of photos from the list of photos loaded into the Face Recognition DB control panel is done through the «  » menu (see Fig. 4.2-20). However, photos are removed only from the list of photos loaded into the Face Recognition DB control panel; they are not deleted from the Face Recognition DB itself.

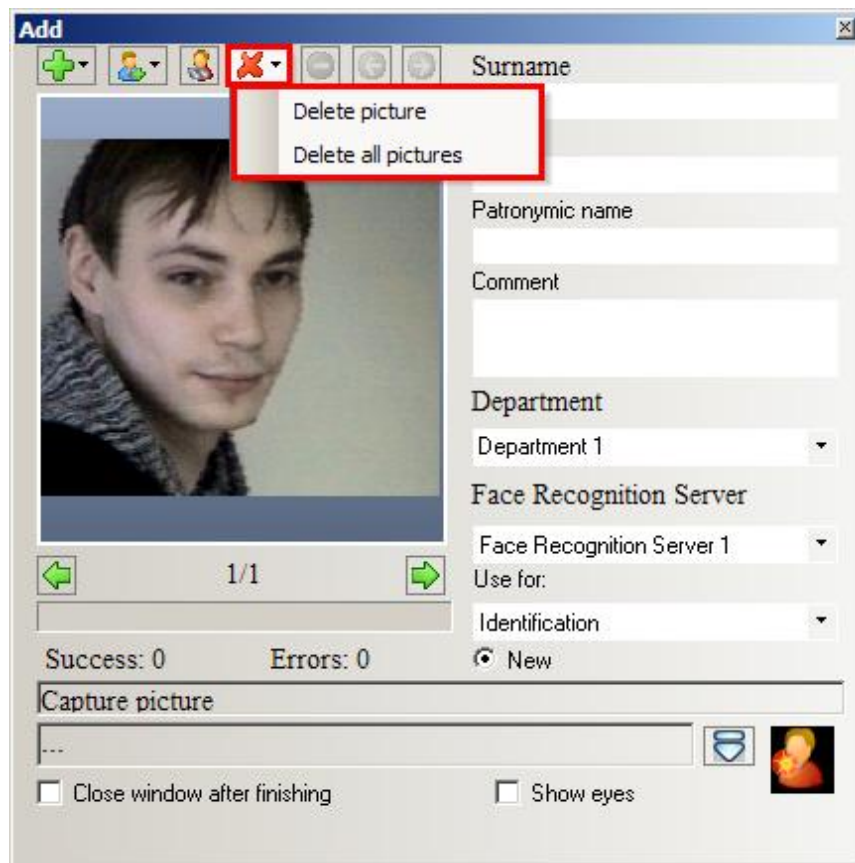





Fig. 4.2-20 Deleting photos (menu)

The «» menu contains the following options for deleting loaded photos:

1. Delete photo – deletes the selected loaded photo;
2. Delete all photos – deletes all loaded photos.

In order to delete the selected photo, select the “Delete photo” option in the «» menu.

In order to delete all selected photos, select the “Delete all photos” option in the «» menu.

#### 4.2.3.7 Searching for people by photo



People searches by photo are carried out using the «» option in the Face Recognition DB control panel (see Fig. 4.2-21).



Fig. 4.2-21 People search

Searches for recognized faces resembling a given photo are performed as follows:

1. Load (see the “Loading and saving photos” section) or add (see the “Adding photos to the Face Recognition Database” section) the necessary photo, which will be used as a search sample;
2. Select the «  » option;
3. The number of found faces will be displayed in the lower part of the Face Recognition DB control panel (see Fig. 4.2-21), and the found faces will be added to the beginning of the Detected Faces Viewer, to the face recognition panel, and also to the “Recognized Faces Monitor” interface window.

*NOTE. Search results will also be displayed on the “Archive” tab of the “Recognized Faces Monitor” window.*

#### 4.2.4 Working with a photoarchive of recognized faces

##### 4.2.4.1 Switching to the photoarchive

Switching to the photoarchive is done via the «  » icon located in the bottom-right corner of the Detected Faces Viewer (see Fig. 4.2-22).

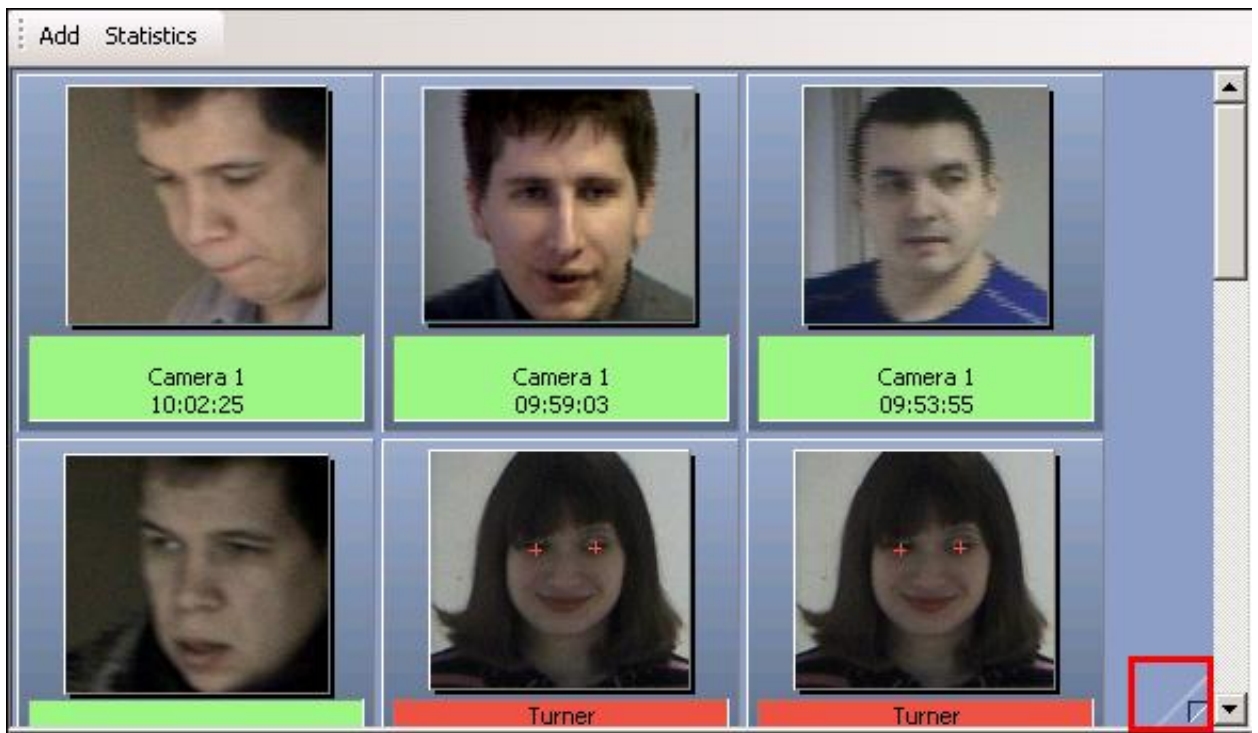



Fig. 4.2-22 Accessing the photoarchive

After clicking the  icon, the Detected Faces Viewer will be cleared and the photoarchive navigation panel will appear (see Fig. 4.2-23).

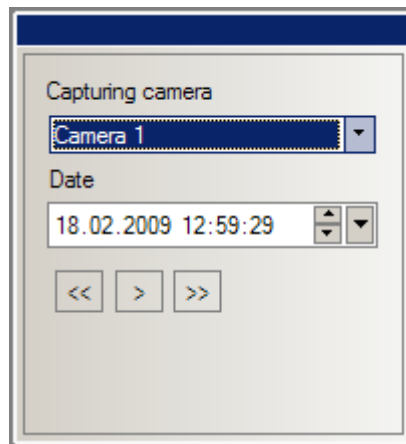


Fig. 4.2-23 Photoarchive navigation panel

#### 4.2.4.2 Photoarchive navigation

Navigation through the photoarchive is done using the navigation panel (see Fig. 4.2-24).

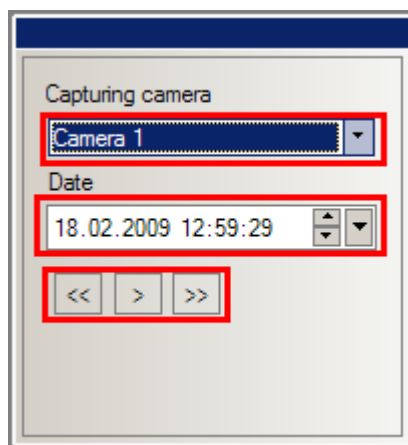


Fig. 4.2-24 Photoarchive navigation panel

In order to navigate through an archive, select a camera ("Camera capture" list) and date ("Date" field) and then click the « > » button. The Detected Faces Viewer will display a list of found faces (see Fig. 4.2-25).

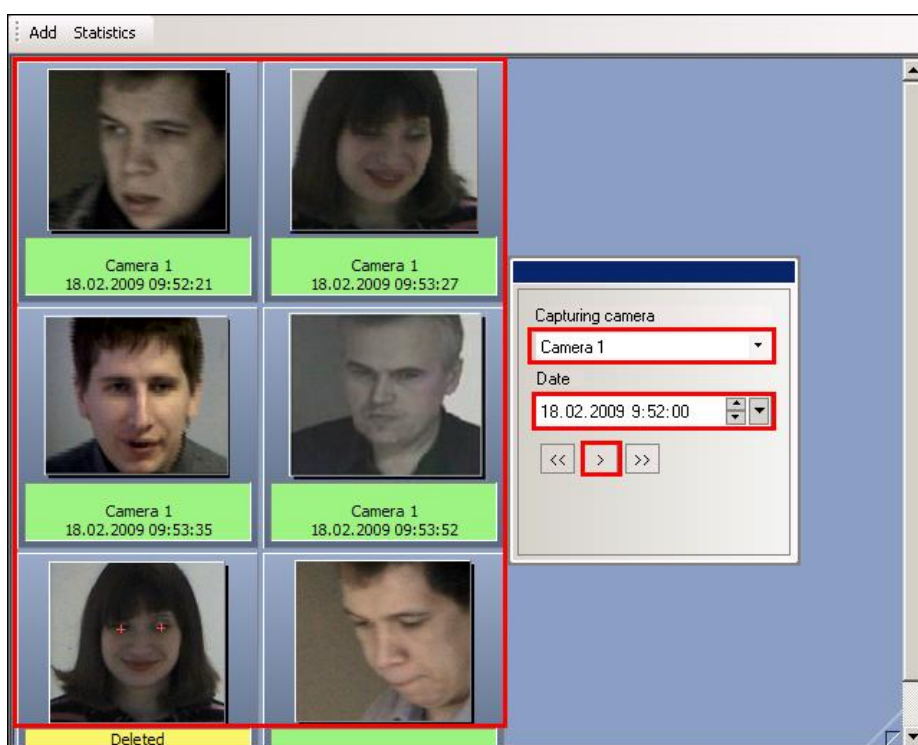


Fig. 4.2-25 Display of found faces

The « << » and « >> » buttons are used to add photos of detected faces that were captured at a previous or later time than the displayed photos of found faces (see Fig. 4.2-26).

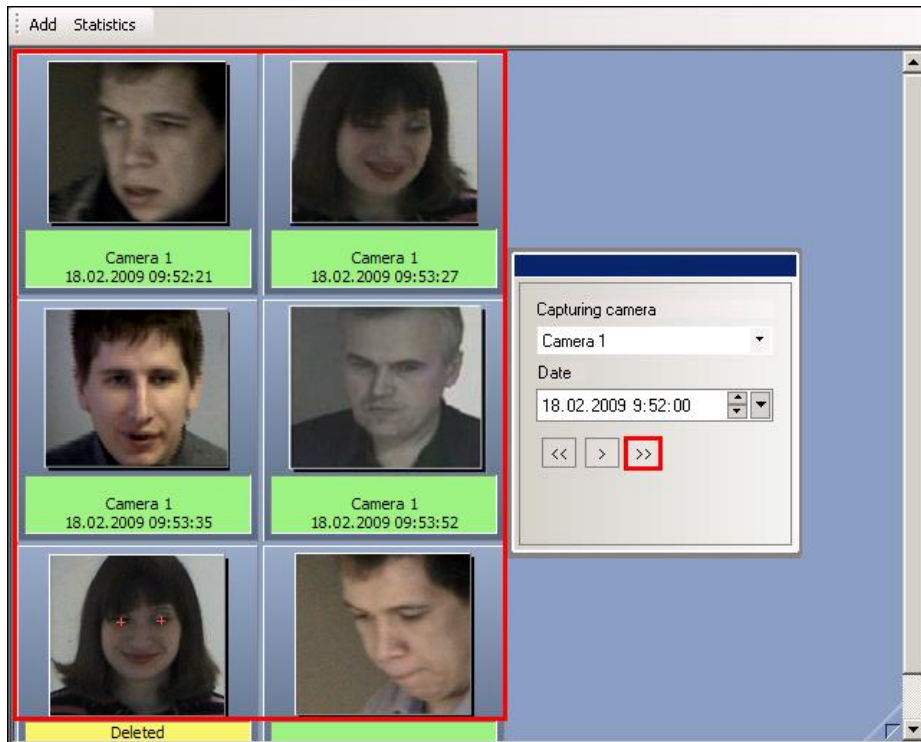



Fig. 4.2-26 Adding subsequently captured faces

Working with found faces is identical to working with detected faces in the Detected Faces Viewer (see the “Registering detected faces” section).

#### 4.2.4.3 *Exiting the photoarchive*

To stop working with the photoarchive, click the «  » button once again (see Fig. 4.2-27).

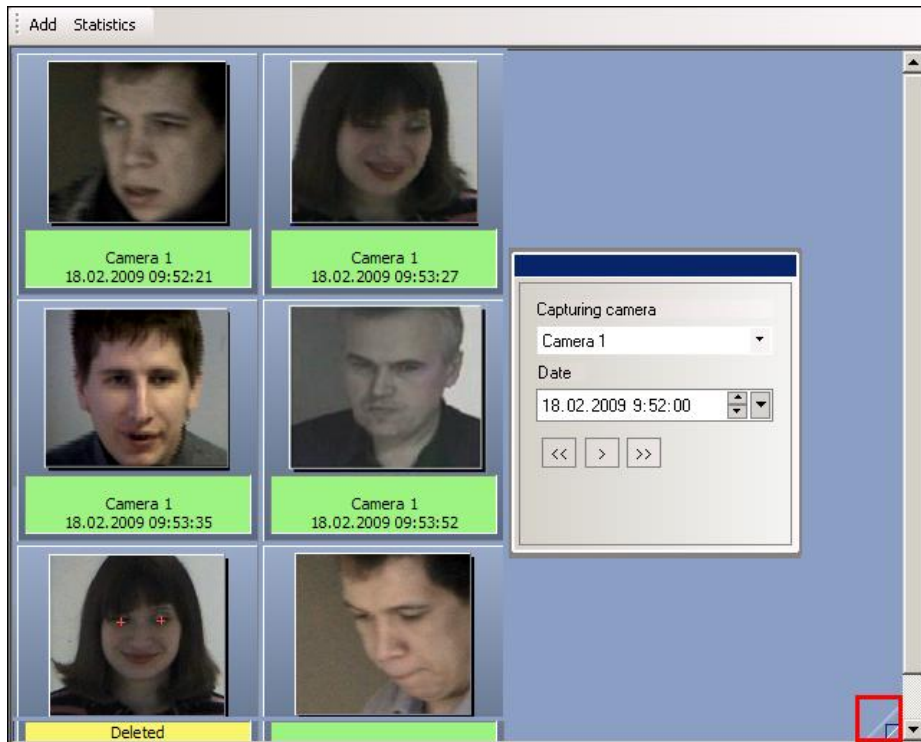


Fig. 4.2-27 Exiting the photoarchive

The Detected Faces Viewer will then restore its previous view (restores the list of detected faces that were displayed before entering the photoarchive).

#### 4.2.5 Working with a detection camera's videoarchive

##### 4.2.5.1 Accessing the videoarchive

Access to a videoarchive is provided through the "Show video" button on the face recognition panel (see Fig. 4.2-28).

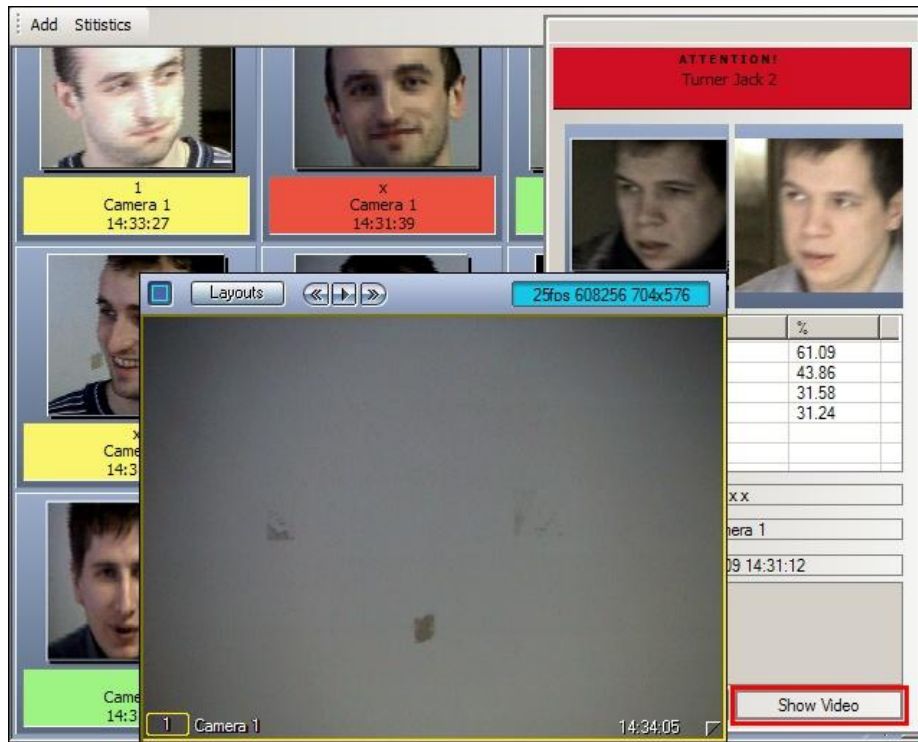


Fig. 4.2-28 Accessing a videoarchive

If the screen is currently displaying a monitor from the video surveillance window corresponding to the given surveillance camera (see Fig. 4.2-28), then the given video surveillance window will begin playback of archived recordings after clicking the “Show video” button (see Fig. 4.2-29).

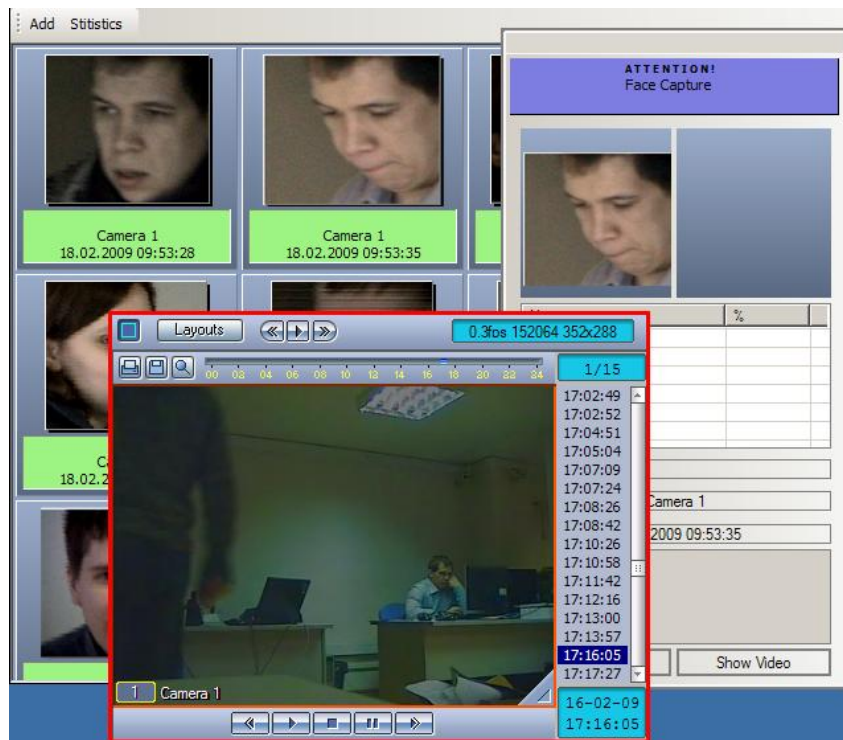


Fig. 4.2-29 Working with a videoarchive

#### 4.2.5.2 Videoarchive navigation

Navigation through a videoarchive (working with a video surveillance window with playback of archived recordings) is described in “Intellect Software Package (base): Operator’s Guide”.

*NOTE. This capability is fully provided if the Software is properly configured for it (see “Intellect Software Package (base): Administrator’s Guide”).*

#### 4.2.5.3 Exiting the videoarchive

To exit videoarchive mode, click the "Show video" button again on the face recognition panel (see Fig. 4.2-30).

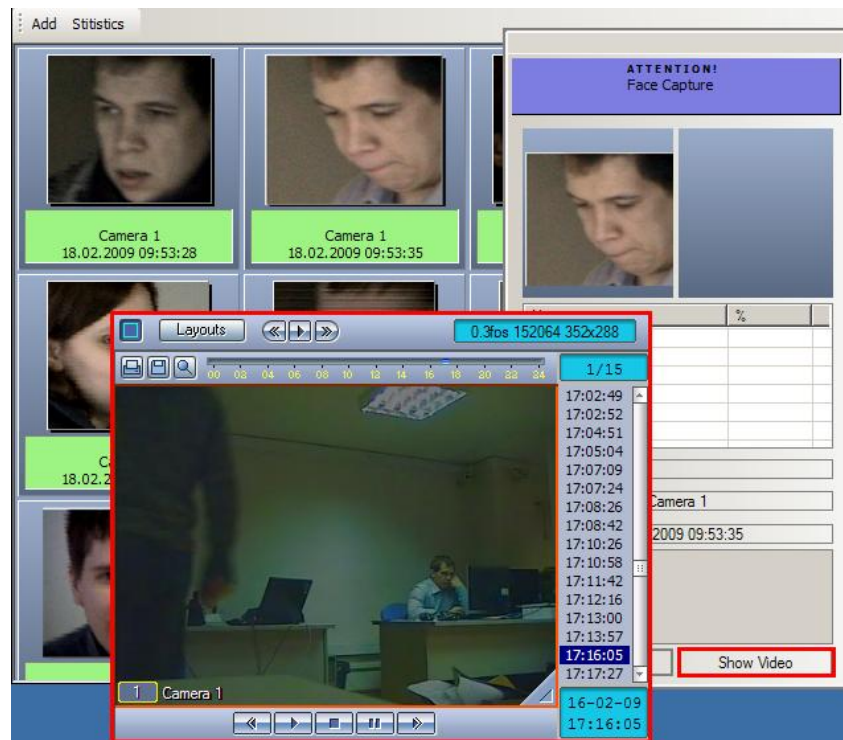


Fig. 4.2-30 Exiting the videoarchive

After clicking the “Show video” button, the corresponding video surveillance window will stop playback of archived recordings and return to its previous state (see Fig. 4.2-31).

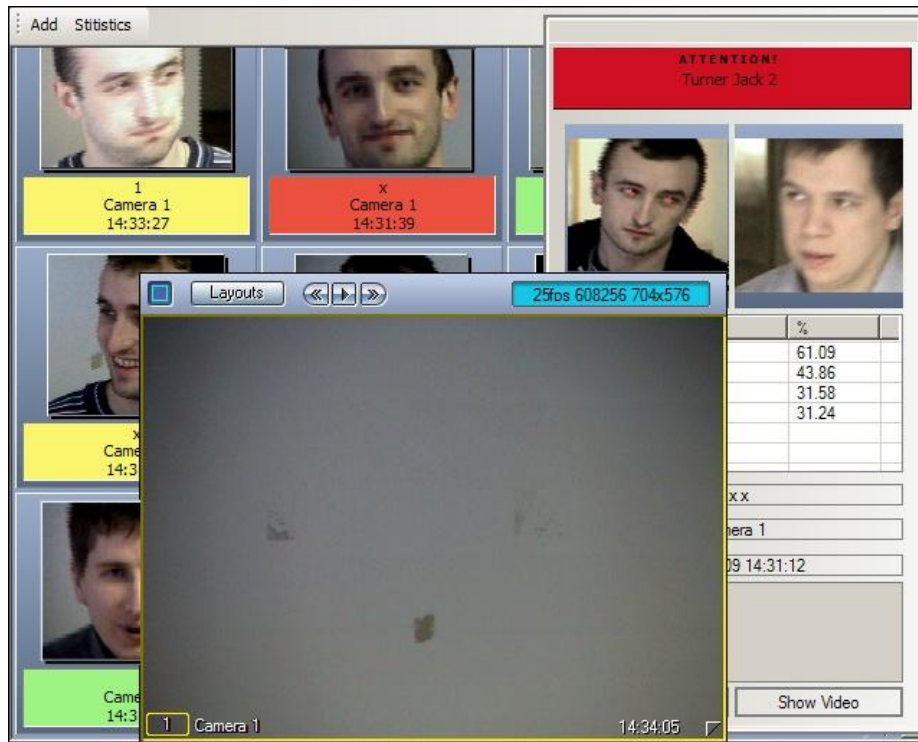


Fig. 4.2-31 Initial state of the video surveillance window

## 4.2.6 Working with statistical data from a face recognition server

### 4.2.6.1 Accessing statistical data

Access to statistical data is provided through the "Statistics" button located in the upper-left corner of the Detected Faces Viewer (see Fig. 4.2-32).



Fig. 4.2-32 Accessing statistical data

After clicking the "Statistics" button, the "Face capture and recognition statistics" window will appear (see Fig. 4.2-33).

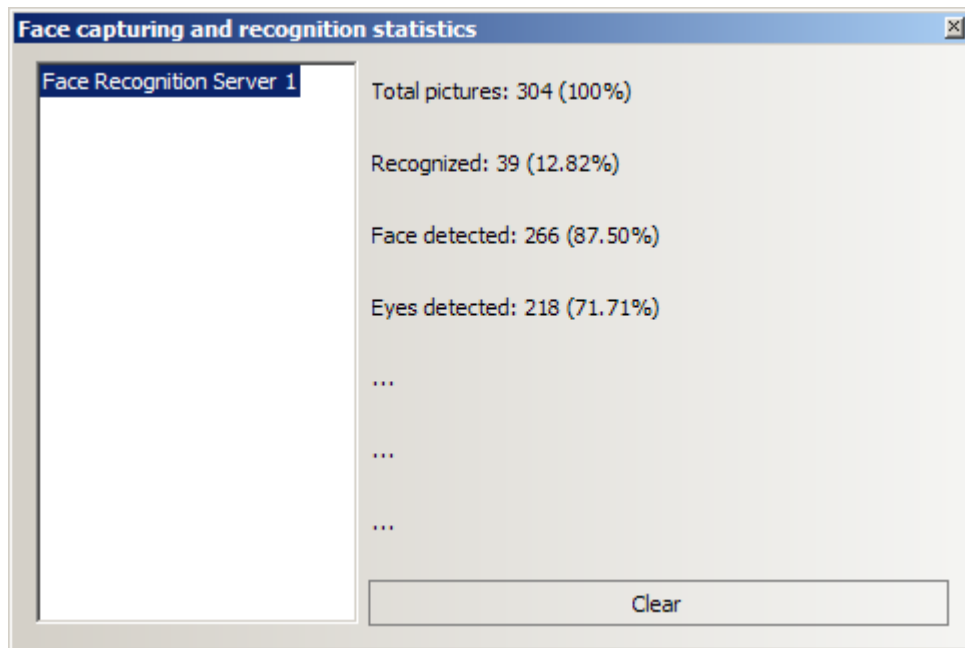


Fig. 4.2-33 "Face capture and recognition statistics" window

#### 4.2.6.2 Navigating the “Face capture and recognition statistics” window

Navigation of the “Face capture and recognition statistics” window consists of selecting a face recognition server.

A face recognition server is selected in the left part of the “Face capture and recognition statistics” window. After selecting a face recognition server, statistics for the given server are displayed on the right-hand side of the window (see Fig. 4.2-34).

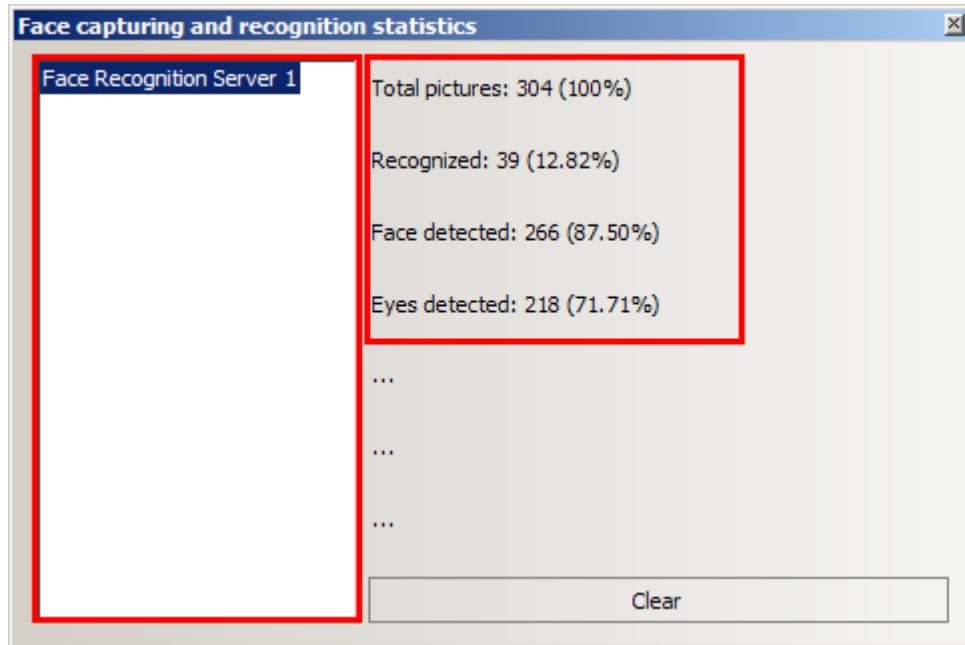


Fig. 4.2-34 Navigating and viewing statistical data

#### 4.2.6.3 Discarding statistical data

The “Discard statistical data” function is used to delete statistical data from the selected face recognition server.

To discard statistical data, the following steps must be performed:

1. Select the face recognition server (see Fig. 4.2-35).
2. Click the “Clear” button (see Fig. 4.2-35).

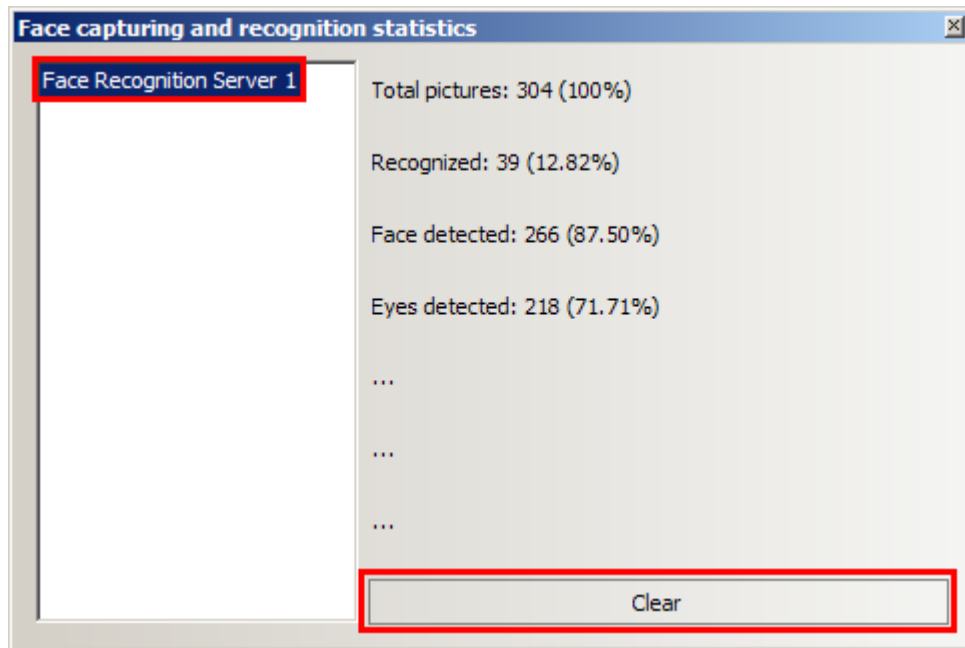


Fig. 4.2-35 Discarding statistical data (selecting a recognition server)

3. The statistical data of the selected server will then be deleted (see Fig. 4.2-36).

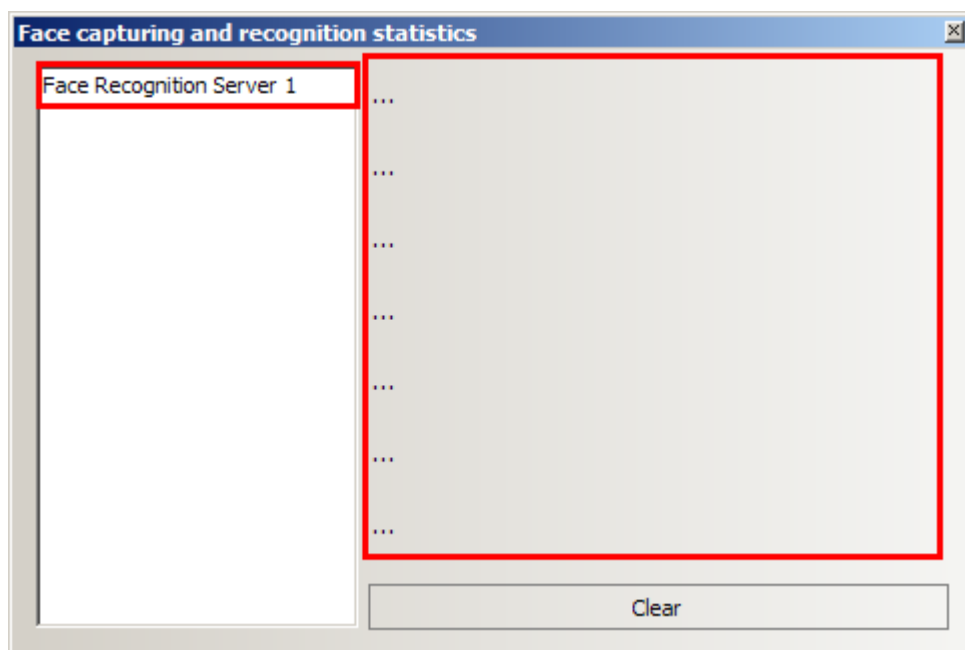


Fig. 4.2-36 Discarding statistical data (data discarded)

## 4.3 Working with the “Recognized Faces Monitor” window

### 4.3.1 Viewing personal data on recognized faces

Personal data on recognized faces in the viewer and in the recognized faces archive can be viewed by double-clicking on the image of a specific face.

The appearing panel will display the personal information of the selected face (see Fig. 4.3-1).

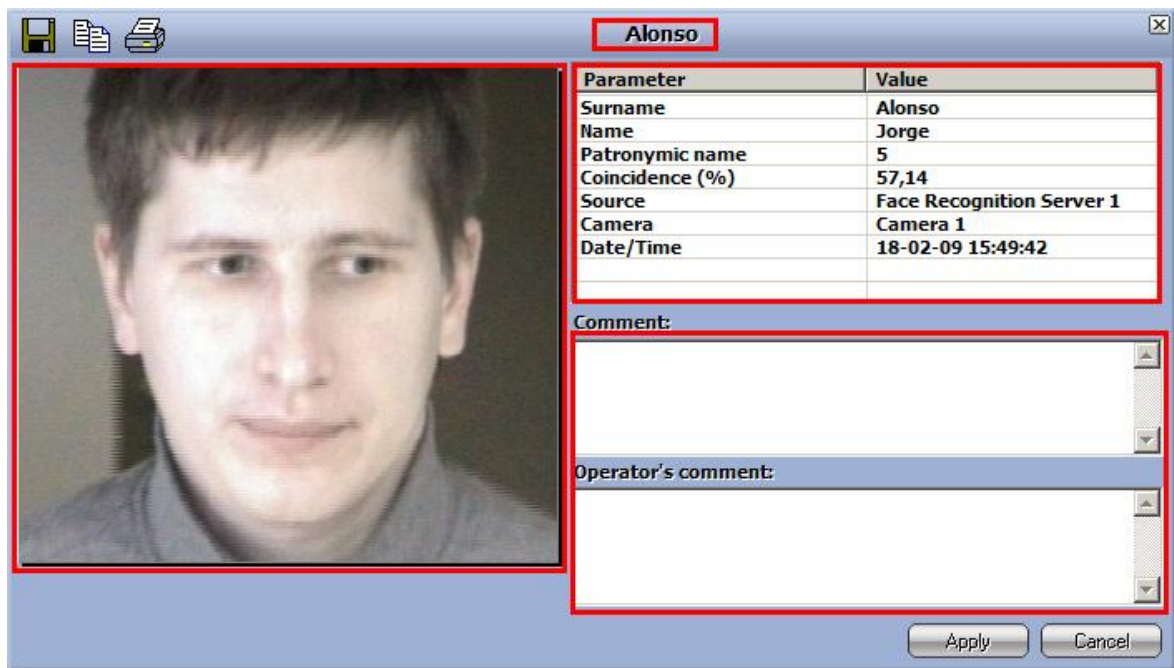


Fig. 4.3-1 Viewing personal data of recognized faces

The following information is displayed for each face:

1. Surname and initials ("Surname", "First name" and "Middle name" fields);
2. Level of resemblance ("Percent match" field);
3. Name of recognition server ("Source" field);
4. Detection camera ("Camera" field);
5. Date and time of recognition ("Date/Time" field);
6. Administrator's comments ("Comments" field);
7. Operator's comments ("Operator's comments" field).

You can enter or change your comments ("Operator's comments"), after which you must click "Accept" or "OK" to save the comment (or "Cancel" to cancel changes).

#### 4.3.2 Exporting and printing personal data of recognized faces

Personal data on recognized faces can be exported and printed while viewing the personal data (see the "Viewing personal data on recognized faces" section).

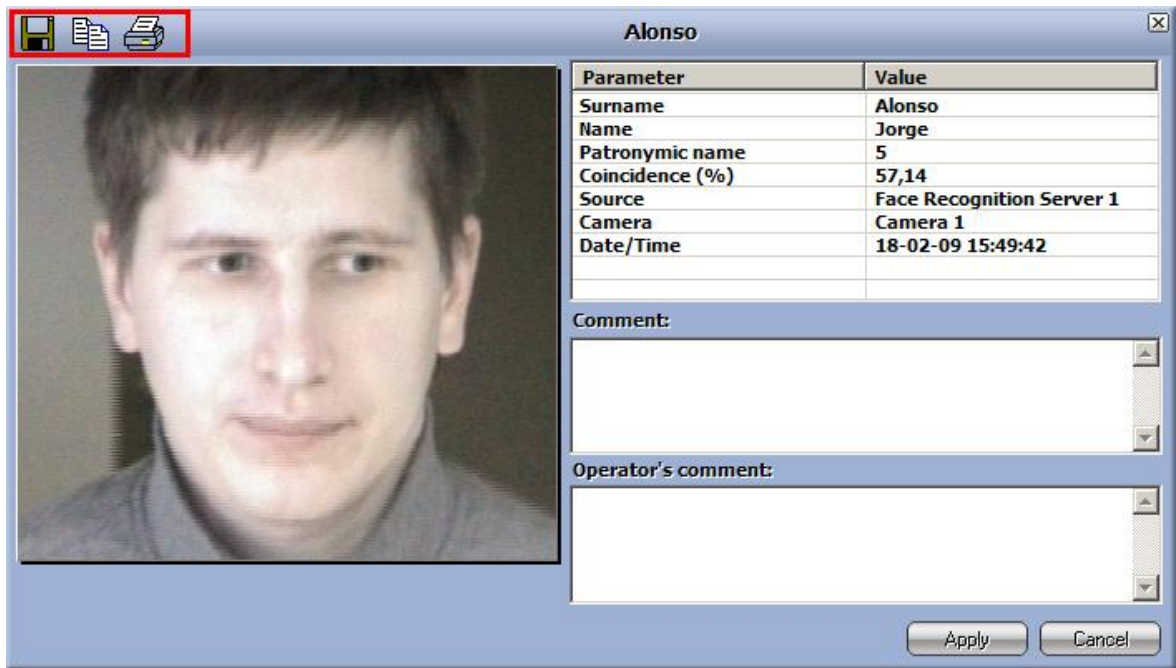



Fig. 4.3-2 Exporting and printing personal data on recognized faces

In order to save a photo of a recognized face to file, click the «  » button (see Fig. 4.3-2). Indicate the path and filename and select the file format (Windows Bitmap (BMP) or JPEG (JPG)) in the appearing dialog box and click the "Save" button (see Fig. 4.3-3).

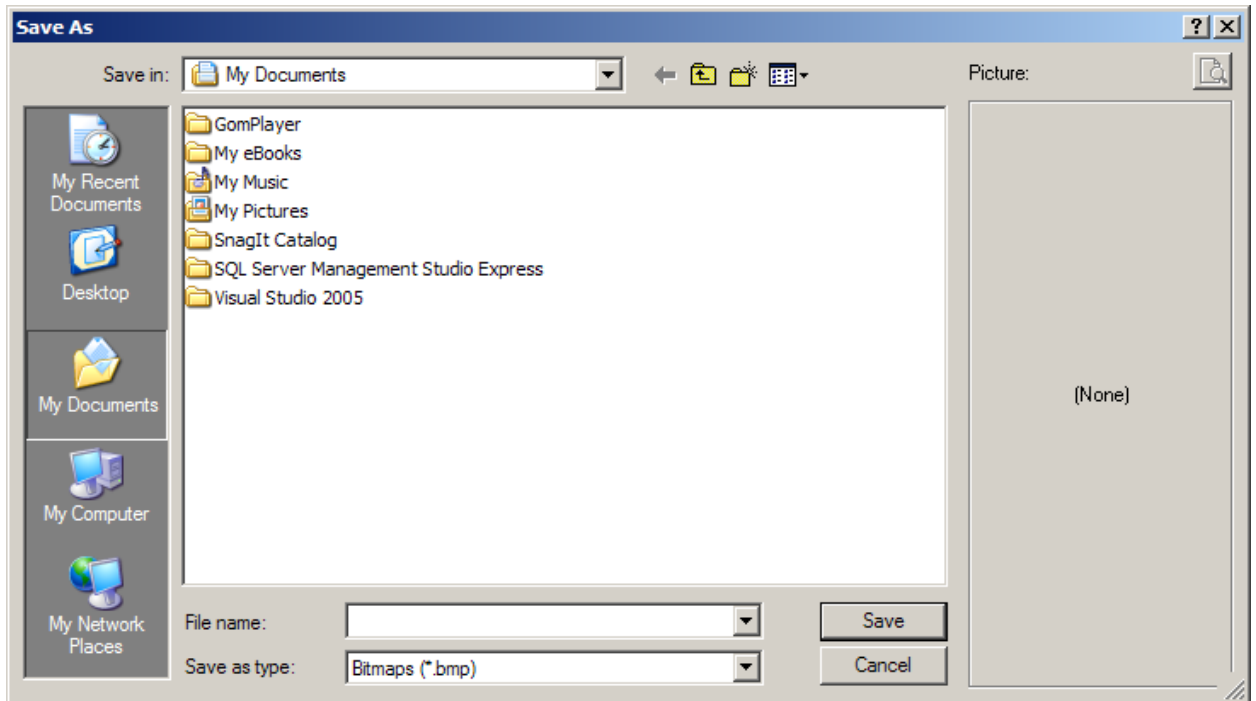


Fig. 4.3-3 Saving a photo of a recognized face to file

To print a photo, click the «  » button (see Fig. 4.3-3).

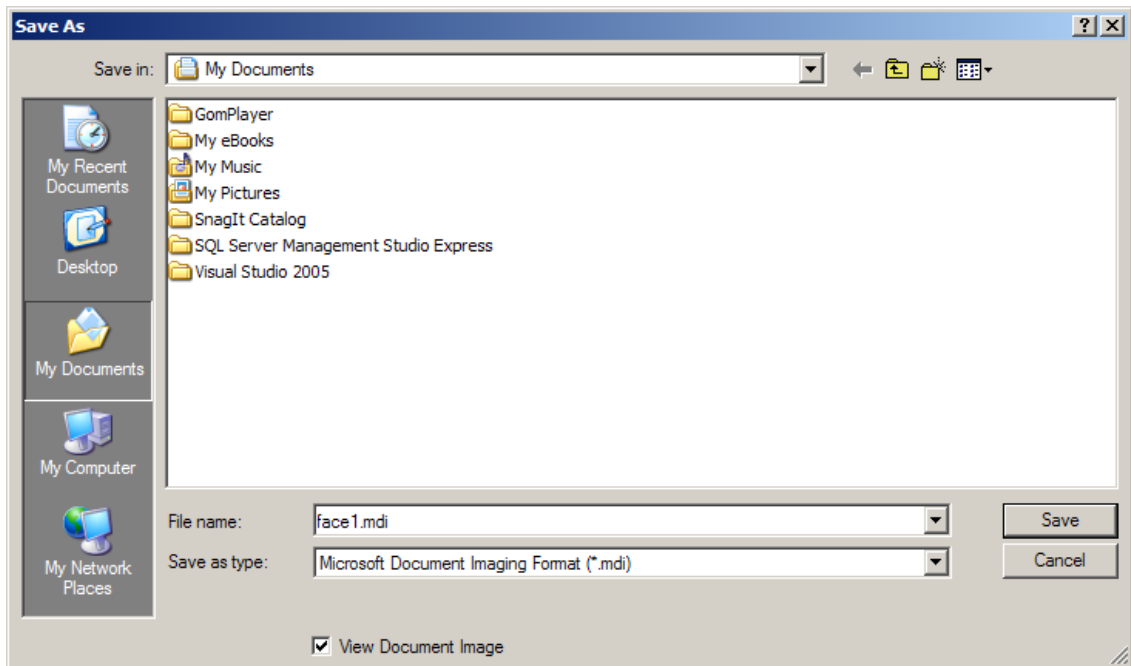



Fig. 4.3-4 Saving a photo of a recognized face to file

To copy a photo to the Windows clipboard, click the  button (see Fig. 4.3-4).

### 4.3.3 Searching recognized faces (navigating the recognized faces archive)

A search of the recognized faces archive is done using the context menu of the recognized face on the “Protocol” tab (see Fig. 4.3-5) or directly through the “Archive” tab (see Fig. 4.3-6).

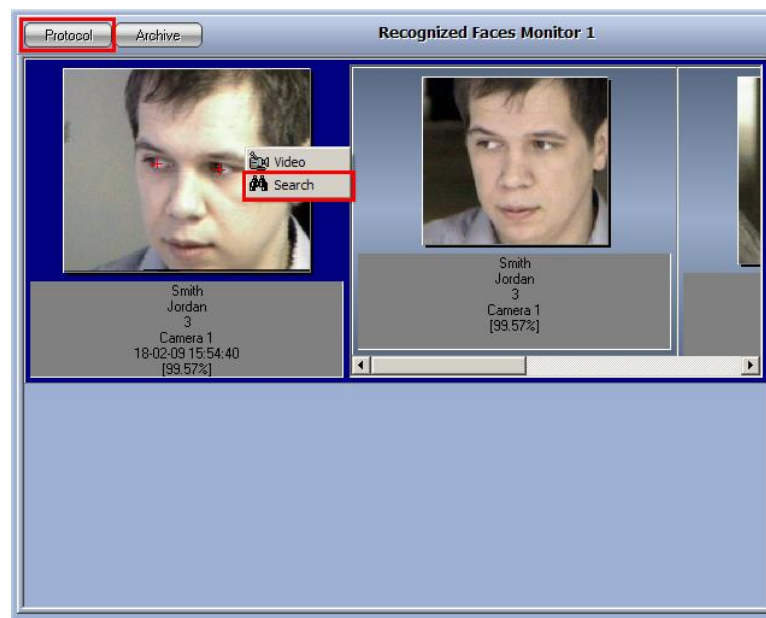


Fig. 4.3-5 Searching recognized faces (“Protocol” tab)

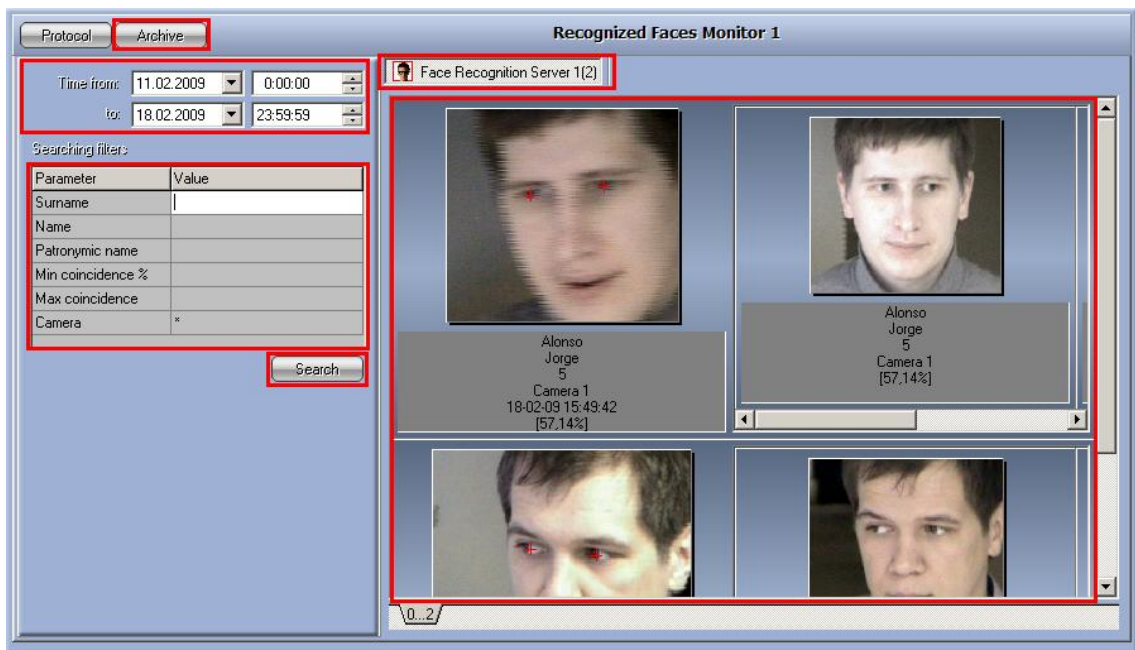


Fig. 4.3-6 Searching recognized faces (“Archive” tab)

If a search needs to be done in the personal data archive for a recognized face located in the “Protocol” tab, then the following must be done (see Fig. 4.3-5):

1. right-click the recognized face;
2. select "Search" in the context menu that appears;
3. this will switch you to the “Archive” tab and a search for the first and last names of the selected face will automatically be launched;
4. when necessary, you may refine the search criteria and run a new search (see below).

The general search algorithm on the “Archive” tab is as follows:

1. select a face recognition server;
2. enter the date and time of the beginning and end of the time interval in which the face was recognized;
3. search filters can be set if necessary: surname and initials of the desired face (“Surname”, “First name”, “Middle name” field), minimum and maximum levels of resemblance (“Minimum percent match” and “Maximum percent match” fields), and detection camera (“Camera” field);
4. the search will look for recognized faces that satisfy the set conditions, and the search results will be displayed in the right part of the window (see Fig. 4.3-6).

**Attention!** When viewing the recognized faces archive, it must be remembered that search results pertain to the photo on the Face Recognition DB control panel (see the “Searching for people by photo” section).

#### 4.3.4 Viewing a video fragment that corresponds to a recognized face

A video fragment corresponding to a recognized face may be viewed through the “Protocol” or “Archive” tabs. Video fragments are viewed through the “Video” option of the recognized face’s context menu (see Fig. 4.3-7 and Fig. 4.3-8).

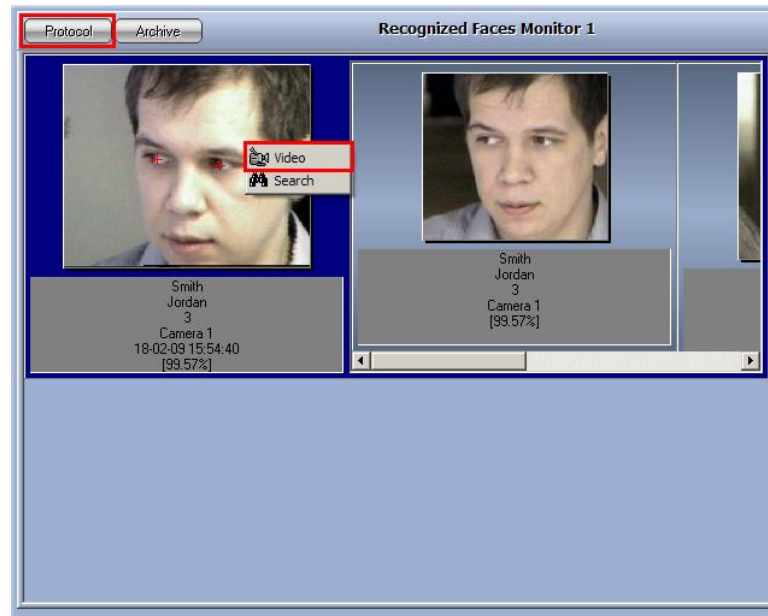


Fig. 4.3-7 Viewing a video fragment that corresponds to a recognized face (“Protocol” tab)

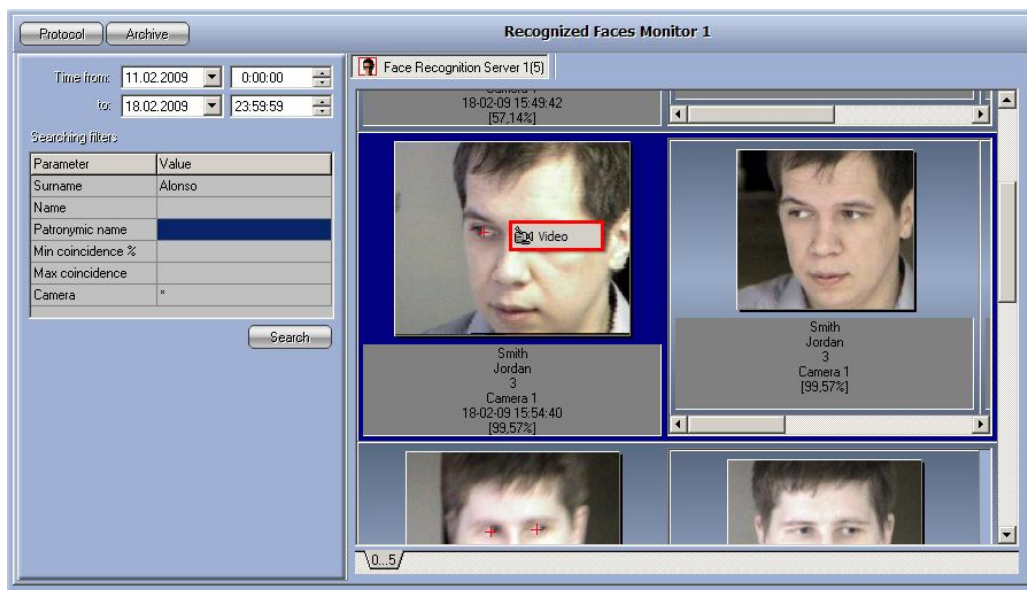


Fig. 4.3-8 Viewing a video fragment that corresponds to a recognized face (“Archive” tab)

If the screen is currently displaying a monitor from the video surveillance window corresponding to the given surveillance camera, then the given video surveillance window will begin playback of archived recordings after clicking the “Video” option (see Fig. 4.3-9).



Fig. 4.3-9 Working with a videoarchive

Navigation through a videoarchive (working with a video surveillance window with playback of archived recordings) is described in “Intellect Software Package (base): Operator’s Guide”.

*NOTE. This capability is fully provided if the Software is properly configured for it (see “Intellect Software Package (base): Administrator’s Guide”).*

## 5 Description of the Face Intellect user interface

### 5.1 The Face Monitor window

#### 5.1.1 Detected Faces Viewer

Fig. 5.1-1 shows the Detected Faces Viewer.



Fig. 5.1-1 View of the Detected Faces Viewer interface

The components of the Detected Faces Viewer interface are described in Table 5.1-1.

Table 5.1-1


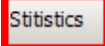



Image of component	Comments
	"Add" button used to access the Face Recognition DB control panel
	"Statistics" button used to view statistical data from recognition servers

Image of component	Comments
	Field for displaying photos of detected faces
	Field for displaying video frames of a detected face
	Button used to access a photoarchive

### 5.1.2 Face Recognition Panel

Fig. 5.1-2 shows the Face Recognition Panel.

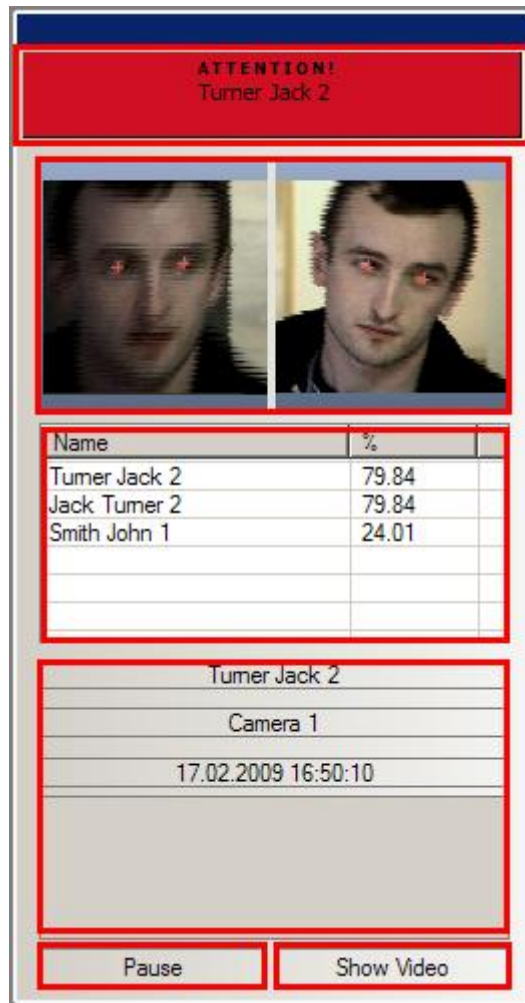


Fig. 5.1-2 View of the Face Recognition Panel interface

The components of the Face Recognition Panel interface are described in Table 5.1-2.

Table 5.1-2

Image of component	Comments
	Field for displaying the surname and initials of a recognized face
	Photos of a detected face and the reference image for which data is stored in the Face Recognition Database

Image of component	Comments
	Table showing the recognized face's resemblance to the best matched faces in the Face Recognition DB
	Field for displaying data on a recognized face (surname and initials of the recognized face, detection camera, data and time of recognition, comments)
	Button for starting and stopping the face detection (recognition) process
	Button used to access a photoarchive

### 5.1.3 Facial Recognition Database control panel

Fig. 5.1-3 shows the Facial Recognition DB control panel.

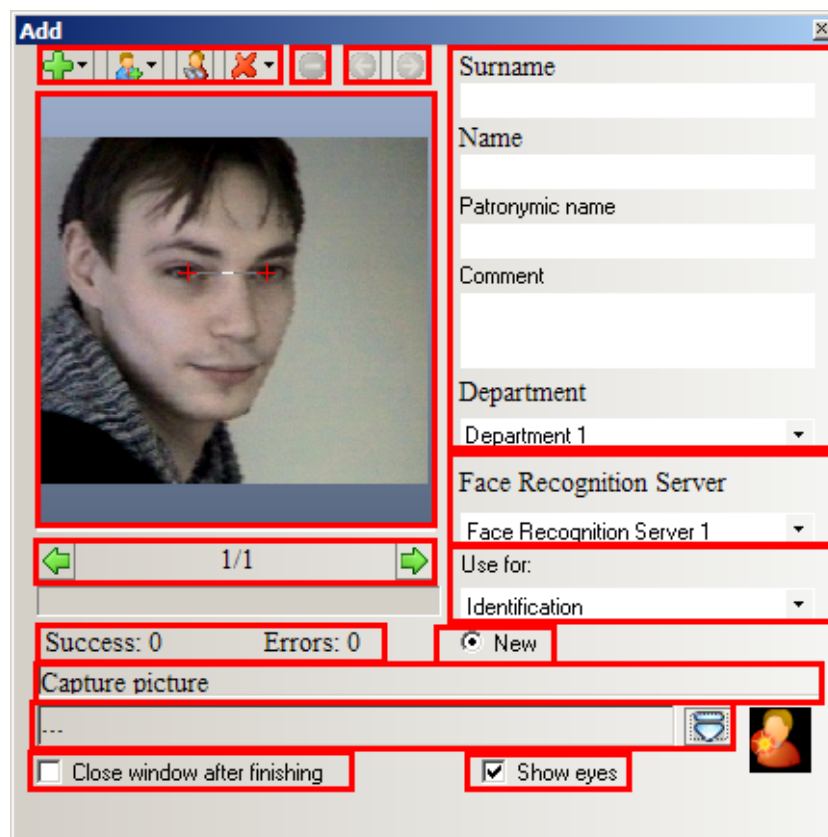


Fig. 5.1-3 View of the Detected Faces Viewer interface

The components of the Face Recognition DB control panel interface are described in Table 5.1-3.

Table 5.1-3





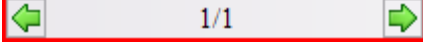
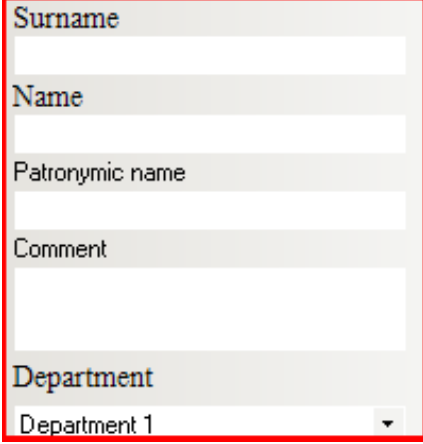



Image of component	Comments
	Menu for accessing operations involving persons and photos
	"Terminate current operation" button
	Navigation through photos that have not been added (due to errors when trying to add them)
	Field for displaying the selected loaded photo
	Components for managing loaded photos
	Fields for input/output of personal data
	List for selecting a face recognition server
	List of options for adding photos  If "Identification" is selected, then the photo is added to the face recognition server's DB and is used for face recognition If "Verification" is selected,

Image of component	Comments
	then the photo is used only with the access control system to confirm the identity of a card holder
<input type="radio"/> New	Radio button for selecting how a face is added
Success: 0      Errors: 0  Capture picture	Component to display information on completed operations
... 	Components used to check photos
<input type="checkbox"/> Close window after finishing	Activation/deactivation of the "Close window after addition" option
<input checked="" type="checkbox"/> Show eyes	Activation/deactivation of the "Show eyes" option

## 5.2 The Recognized Faces Monitor window

### 5.2.1 The Protocol tab

Fig. 5.2-1 shows the "Protocol" tab.

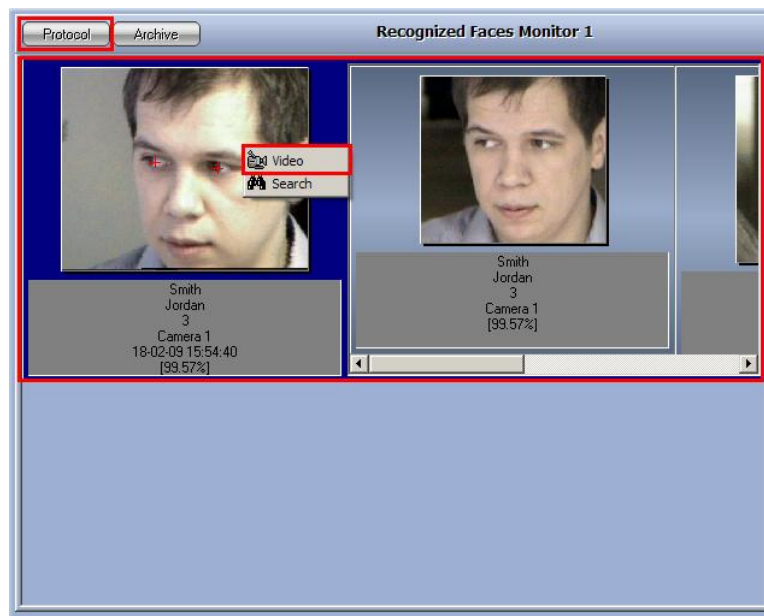
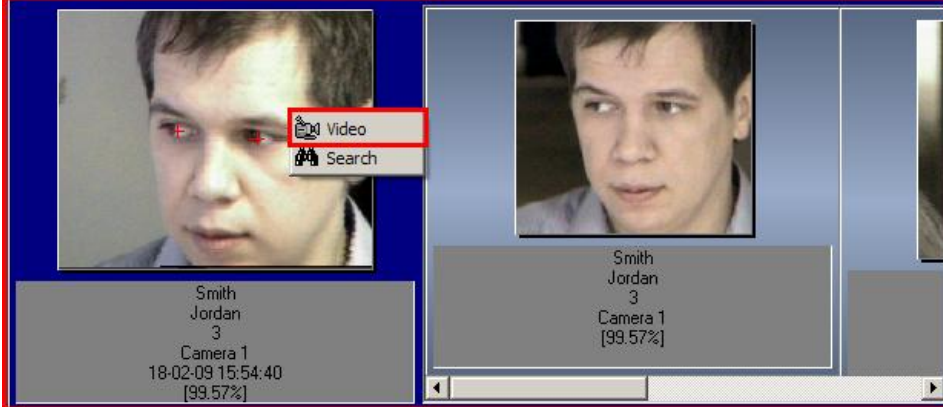


Fig. 5.2-1 View of the "Protocol" tab interface

Table 5.2-1 describes the components of the "Protocol" tab.

Table 5.2-1

Image of component	Comments
	<p>Field for displaying recognized faces (a photo of the detected face and matching photos in the Face Recognition DB are shown for each recognized face)</p>

5.2.2 Archive tab

Fig. 5.2-2 shows the “Archive” tab.

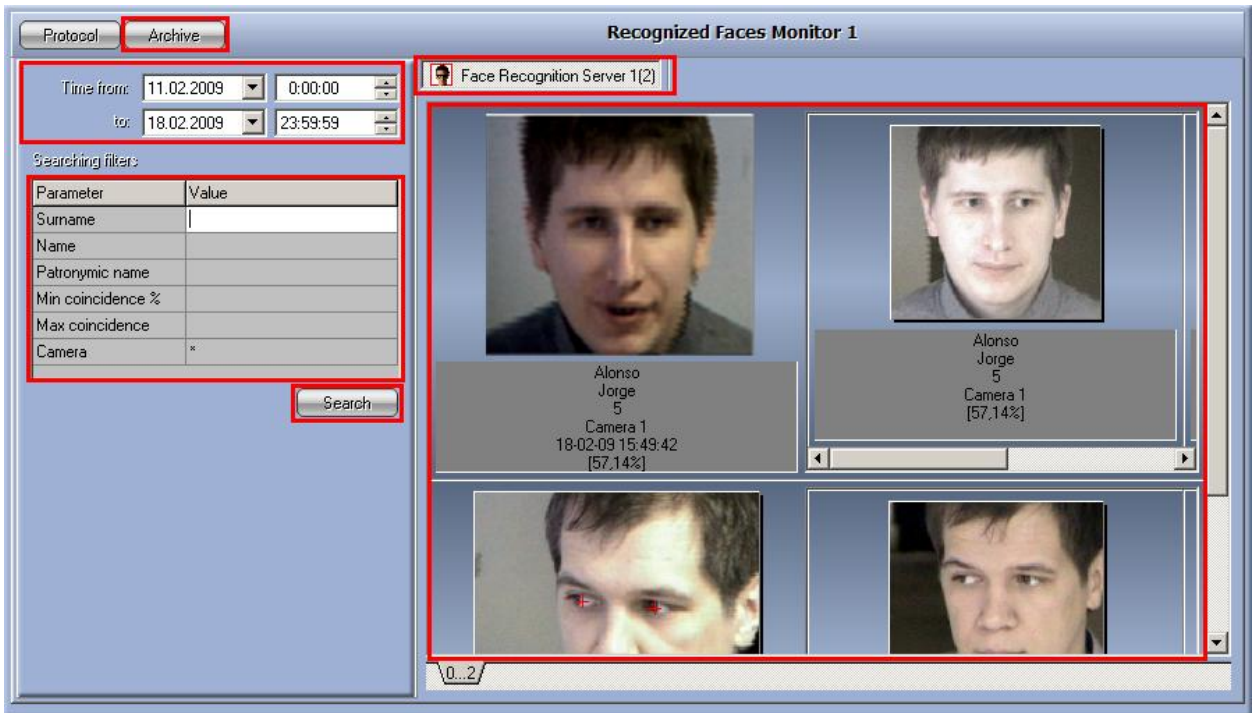


Fig. 5.2-2 View of the “Archive” tab interface

Table 5.2-2 describes the components of the “Archive” tab.

Table 5.2-2


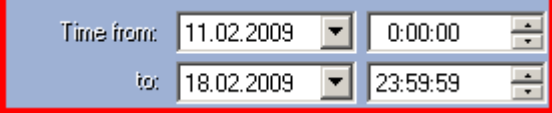

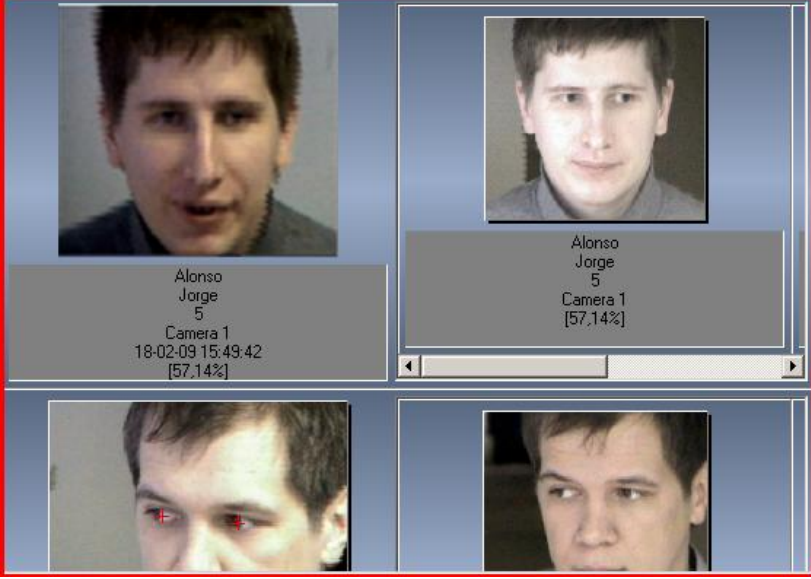
Image of component	Comments
	<p>For selecting a face recognition server</p>

Image of component	Comments														
	<p>For setting the date and time for the beginning and end of the time interval for a face search</p>														
<p>Searching filters</p> <table border="1" data-bbox="233 405 770 689"> <thead> <tr> <th>Parameter</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Surname</td> <td> </td> </tr> <tr> <td>Name</td> <td></td> </tr> <tr> <td>Patronymic name</td> <td></td> </tr> <tr> <td>Min coincidence %</td> <td></td> </tr> <tr> <td>Max coincidence</td> <td></td> </tr> <tr> <td>Camera</td> <td>*</td> </tr> </tbody> </table>	Parameter	Value	Surname		Name		Patronymic name		Min coincidence %		Max coincidence		Camera	*	<p>Search filters: surname and initials of the searched face ("Surname", "First name", "Middle name" fields), minimum and maximum level of resemblance ("Minimum percent match" and "Maximum percent match" fields), and detection camera ("Camera" field).</p>
Parameter	Value														
Surname															
Name															
Patronymic name															
Min coincidence %															
Max coincidence															
Camera	*														
	<p>"Search" button for processing the search query</p>														
	<p>Field for displaying search results (a photo of the detected face and matching photos in the Face Recognition DB are shown for each recognized face found)</p>														

### 5.2.3 Panel for viewing personal data on recognized faces

Fig. 5.2-3 shows the panel used for viewing personal data on a recognized face.

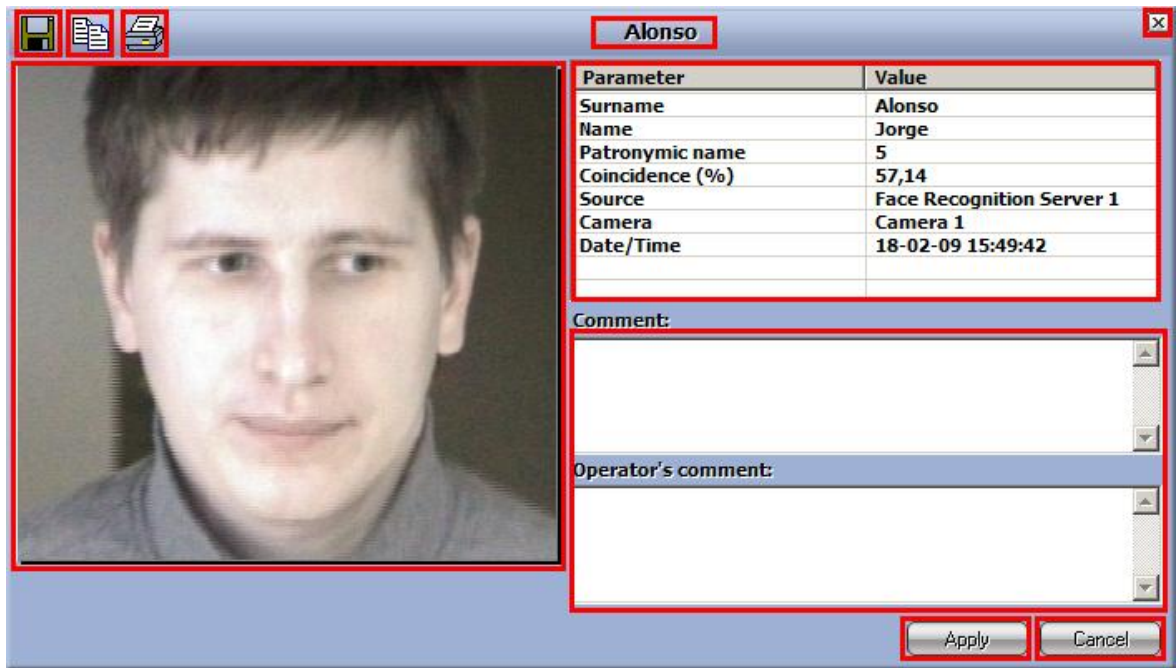


Fig. 5.2-3 View of the interface used for viewing personal data on a recognized face

Components of the interface panel used for viewing personal data on a recognized face are described in Table 5.2-3.

Table 5.2-3




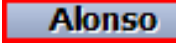

Image of component	Comments
	"Save" button (saving a photo to file)
	"Copy" button
	"Print" button
	Surname of a recognized face
	Photo of a recognized face

Image of component	Comments																		
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Surname</td> <td>Alonso</td> </tr> <tr> <td>Name</td> <td>Jorge</td> </tr> <tr> <td>Patronymic name</td> <td>5</td> </tr> <tr> <td>Coincidence (%)</td> <td>57,14</td> </tr> <tr> <td>Source</td> <td>Face Recognition Server 1</td> </tr> <tr> <td>Camera</td> <td>Camera 1</td> </tr> <tr> <td>Date/Time</td> <td>18-02-09 15:49:42</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Parameter	Value	Surname	Alonso	Name	Jorge	Patronymic name	5	Coincidence (%)	57,14	Source	Face Recognition Server 1	Camera	Camera 1	Date/Time	18-02-09 15:49:42			<p>Field for displaying information on a recognized face:</p> <p>Surname and initials, match percentage, name of recognition server, detection camera, data and time of recognition ("Date/Time" field)</p>
Parameter	Value																		
Surname	Alonso																		
Name	Jorge																		
Patronymic name	5																		
Coincidence (%)	57,14																		
Source	Face Recognition Server 1																		
Camera	Camera 1																		
Date/Time	18-02-09 15:49:42																		
<p>Comment:</p> <div style="border: 1px solid gray; height: 60px; width: 100%;"></div>	<p>Field for displaying Administrator's comments</p>																		
<p>Operator's comment:</p> <div style="border: 1px solid gray; height: 60px; width: 100%;"></div>	<p>Field for input/output of Operator's comments</p>																		
<div style="border: 1px solid gray; padding: 2px; display: inline-block;">Apply</div>	<p>Closes the window and saves changes</p>																		
<div style="border: 1px solid gray; padding: 2px; display: inline-block;">Cancel</div> <div style="border: 1px solid gray; padding: 2px; display: inline-block; margin-top: 5px;">X</div>	<p>Closes the window without saving changes</p>																		