

MultiVision 2 software package. User manual.

1. Features

MultiVision 2 software package is a CMS (Central Monitoring System) application designed for integrating compact up-to-date network video servers of the “Tral 5”, “Tral NAS”, “Tral 3” series into a single network for video surveillance and on-line viewing of videos and archives from devices allocated in the network of devices.

2. System requirements

- 2.1. A personal computer with installed Windows XP/Vista/Seven OS.
- 2.2. CPU clock – 2 GHz or more.
- 2.3. The main memory – 1 GB or more (2+ GB is recommended).
- 2.4. A 100/1000 Mb network adapter.
- 2.5. A discrete graphics adapter.
- 2.6. A monitor with the definition of 1280×1024 or more. FullHD panels are also supported.

3. The package includes:

- 3.1. **MultiVision 2 – Net Viewer:**
software for on-line viewing of the network servers of the “Tral 5” and “Tral 3” series. The Interface allows creating user patterns with a different number of windows (up to 12).
- 3.2. **MultiVision 2 – File Player:**
software for viewing the archives of the servers of the “Tral 5”, “Tral 3”, “Tral M”, “Tral Auto” series.
- 3.3. **MultiVision 2 – MsnToAvi:**
software for converting fragments of archives from *.MSN3 to a commonly used *.AVI format for viewing with standard media players.
- 3.4. **MultiVision 2 – MsnGPS:**
software for selecting and saving GPS-coordinates from the recording fragments into a separate fail.
- 3.5. **MultiVision 2 – Options:**
software for setting parameters of the data displaying in File Player and Net Viewer.
- 3.6. The package also includes software for setting-up servers of “Tral 5” series which are started from the contextual menu, connected with video channel server.

4. Package installation.

- 4.1. Enter the administrator system.
- 4.2. Launch the MultiVision.2.x.x.Installer.exe program.
- 4.3. Following the instructions of the setup wizard select the language, an destination folder and the name for the group pf programs in the **Start Menu**.
- 4.4. After the installation is over, all the package programs become available in the “Start Menu” -> “Programs”.

5. Setting of the interface parameters of MultiVision package.

To set the global interface parameters launch **the MultiVision – Options** software.



5.1. Maps selection – the type of map for the window linked to a GPS-flow.

5.1.1. Google maps – Internet connection is required to work in this mode. In this case the maps will be downloaded from Google Maps server.

5.5.2. Dot-matrix maps – The maps created by user are loaded in this mode.

5.2. Mapping device – setting the video output mode. In most cases DirectX mode is recommended.

5.3. Captioning data – selection of captioning data to be displayed in File Player and Net Viewer.

- 5.3.1. **Source name** – to show the network name of the server.
- 5.3.2. **Channel name** – to show the name of the channel.
- 5.3.3. **Frame number** - to show the number of the frame.
- 5.3.4. **Frame rate** - to show the channel frame rate specified in the server settings.
- 5.3.5. **Operation** – the current archive viewing mode (recording, forward wind, rewind, pause, etc.)
- 5.3.6. **Flow** – to display an average value of video stream.
- 5.3.7. **Activity** – to show the activity in the frame. Switching on this option can help to set the program motion detector as indicator readings correspond to motion detector sensitivity in the drop-down list of the server setting program.
- 5.3.8. **Time** – to show the time in the frame.
- 5.3.9. **Highlighting events** – to highlight the image when some event occurs.
- 5.3.10. **Mask** - to highlight the mask of the program motion detector.

5.4. Events – events displaying managing.

- 5.4.1. **Display time** – the time of displaying the event on the screen in seconds. It is set separately for each type of event (System, Service, General).

6. On-line-video viewer MultiVision 2 – NetViewer



6.1. General notions and features of control elements.

- 6.1.1. **Window** – an area on the page where a server video stream or a map with a GPS-tie is displayed.
- 6.1.2. **Active window** – the window highlighted red. When starting the program a window in the top-left corner will be active. To highlight the active window arrow keys or a single left or right click on the required window is used. The right-click activates the contextual menu used to change the window location on the page, to relink the window and to set the server linked to the window.
- 6.1.3. **Page** – a set of windows simultaneously displayed on the screen. Page settings allow creating different page configurations most suitable for objects surveillance.
- 6.1.4. **Pattern** – a set consisting of several pages. Pattern pages can be switched manually as well as automatically at a set interval. Pattern settings are saved in a configuration file in the *.xnv format.

6.2. Window contextual menu.

To activate the menu right-click on the window field once again. With a left click select an action in the given menu or use an appropriate key combination. Key combinations function for an active window.



- 6.2.1. **Relink** – to activate the window tie dialog.
- 6.2.2. **Break the link** – to delete all settings of the active window tie. In the window without a tie “Not used” message is displayed.
- 6.2.3. **Move left/right/up/down** – to swap the active window with a window in a chosen direction.
- 6.2.4. **Copy** – to copy the active window tie to the clipboard for the further paste.

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- 6.2.5. **Paste** – to fill the active window tie from the clipboard. Inactive when the clipboard is empty.
 - 6.2.6. **Settings** – activation of the server setting software linked to the active window. Depending on the type of the hooked server an appropriate setting software is launched.
 - 6.3. **Window relink dialog.** To activate the window tie dialog you can use the active window contextual menu (“**Relink**”), press “**Enter**” or use the Menu “**Template**” (“**Window**” -> “**Relink**”). The dialog allows setting correspondence between the active window and data flows from the server.

The image shows a 'Relink' dialog box with the following fields and options:

- Device** (tab)
- Address:** 192.168.1.32
- Platform:** Tral 5
- Port:** 5049
- Login:** guest
- Password:** (empty)
- Video:** Camera 1
- Audio:** None
- Subtitles:**
 - Channel Subtitles
 - Sensor Subtitles
 - System Subtitles
- Buttons:** Ok, Cancel

- 6.3.1. **Address** – enter the address of the server manually or select the server from a drop-down list of devices automatically found in a network local segment. Both forms of address either domain name or IP-address are acceptable.
- 6.3.2. **Port** – port number for an access to the server. Port 5049 is used on default.

6.3.3. **Login/Password** – login and password for access to the device. It is filled only if the authorization is switched on in the server settings. To view video on-line the access level is to be not lower than “View”. For safety reasons when inputting password symbols are replaced with points.

6.3.4. **Video** – select the video channel or GPS from the drop-down list. A map with additional information and ticked device current position will be displayed when selecting “GPS” with a connected GPS-receiver.

For reasons beyond our control in some cases the program fails to identify the server type automatically and a maximum possible number of channels is shown in the drop-down list.

6.3.5. **Audio** – select an audio channel linked with the active window. Different audio channels can be set for each window on the page. When working with the program only the audio channel linked to the active window (i.e. highlighted red) is played.

6.3.6. **Subtitles** – tick the types of subtitles to be displayed in the window. All subtitles are selected on default.

The list of subtitles available for viewing is to be set in MultiVision – Options software in “Events” section. Program settings on default allow viewing all subtitles (of events) existing in a basic software versions of servers supported.

6.3.7. Click on “Ok” to record changes or “Cancel” to quit the tie dialog.

6.4. Menu “Template”

To activate the menu click on the “Pattern” button.

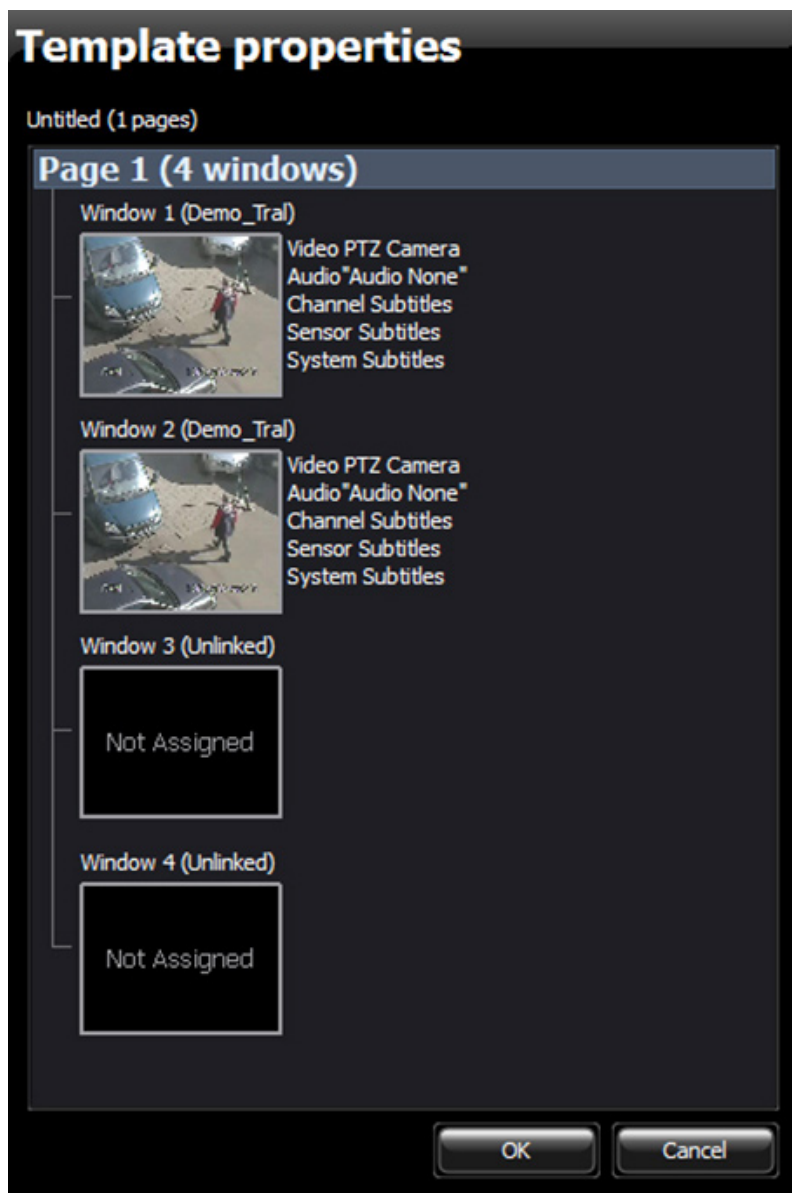


- 6.4.1. **A new template** – click on to create a new pattern. A clear pattern is created on default. It consists of a page of 2×2 window size.
If the active pattern was changed before creating a new one the program will offer saving the configuration. Select a required action and continue work.
- 6.4.2. **Open a template** – to open the previous saved pattern. You will be offered to select a *.xnv file.
- 6.4.3. **Save a template** – to save the changed pattern into a source file. You will be offered to indicate a new name for the new pattern.
- 6.4.4. **Save a template as...** – to save the active pattern into a new file. You will be offered to select the location and filename with .xnv extension. All settings of windows and pages will saved in the file (including authorization and channel tie parameters, etc.)
- 6.4.5. **Template properties** – to show the tree form pattern structure. In the “Pattern Features” window the structure of the active pattern is demonstrably presented. A preview in the static frame form, the net name of the device, its type, and some settings are displayed for each window.

To start viewing the required window highlight it in the list and click on “OK”.

Net Viewer will switch to viewing the selected window.

- 6.4.6. **Previous/Next Page** – switching between pattern pages. The items are inactive if the pattern consists of only one page.



Select the page type



Keys to the right and to the left of “Pattern” or PgUp/PgDown keys can be also used for switching between pages.

6.4.7. Change the page type – menu for changing the pattern active window. You will be offered several variants of pages with various number and location of pages.

Select the page type and click on “OK” to change or “Cancel” to quit the window.

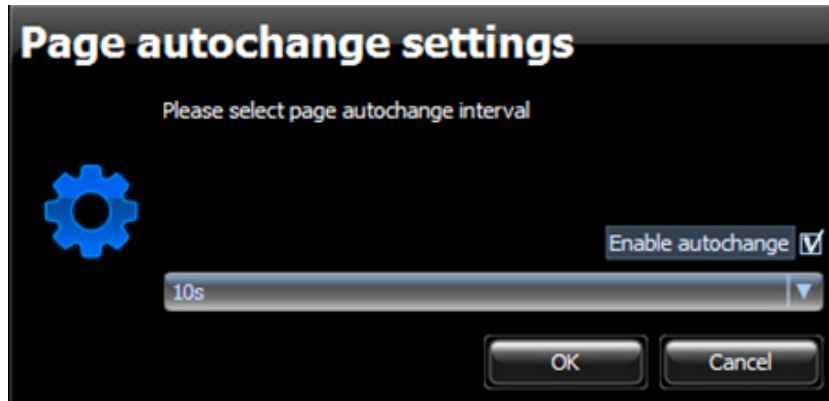
If a new page type contains less windows than the active one you will be offered to delete those not fitting into the page or to move them to a new page. Make your choice and continue working. If you select “Move to a new page” a new page with a maximum number of windows (12) will be created and all those that haven’t fit will be placed on it.

6.4.8. Paste a Page – select for adding a new page after the active one and switching to its viewing.

6.4.9. Duplicate a Page – select for copying the active page. A new page will be placed after the active one in the set and the program will switch to its viewing. While duplication all window tie settings are saved.

6.4.10. Delete a Page – select for deleting the active page from the set.

6.4.11. Auto-change – select for automatic switching between pattern pages.



Tick “Allow auto-change” and select an interval of switching the pages from the drop-down list (from 5 seconds to 10 minutes) to switch on or untick to switch off the auto-change mode.

With the auto-change mode switched on the pages will switch circularly at a set interval.

6.4.12. **Window** – menu for active window managing. It is an absolute duplicate of the active window contextual menu.

6.4.13. **Escape** – select to quit the program. You also can use Alt+F4 combination.

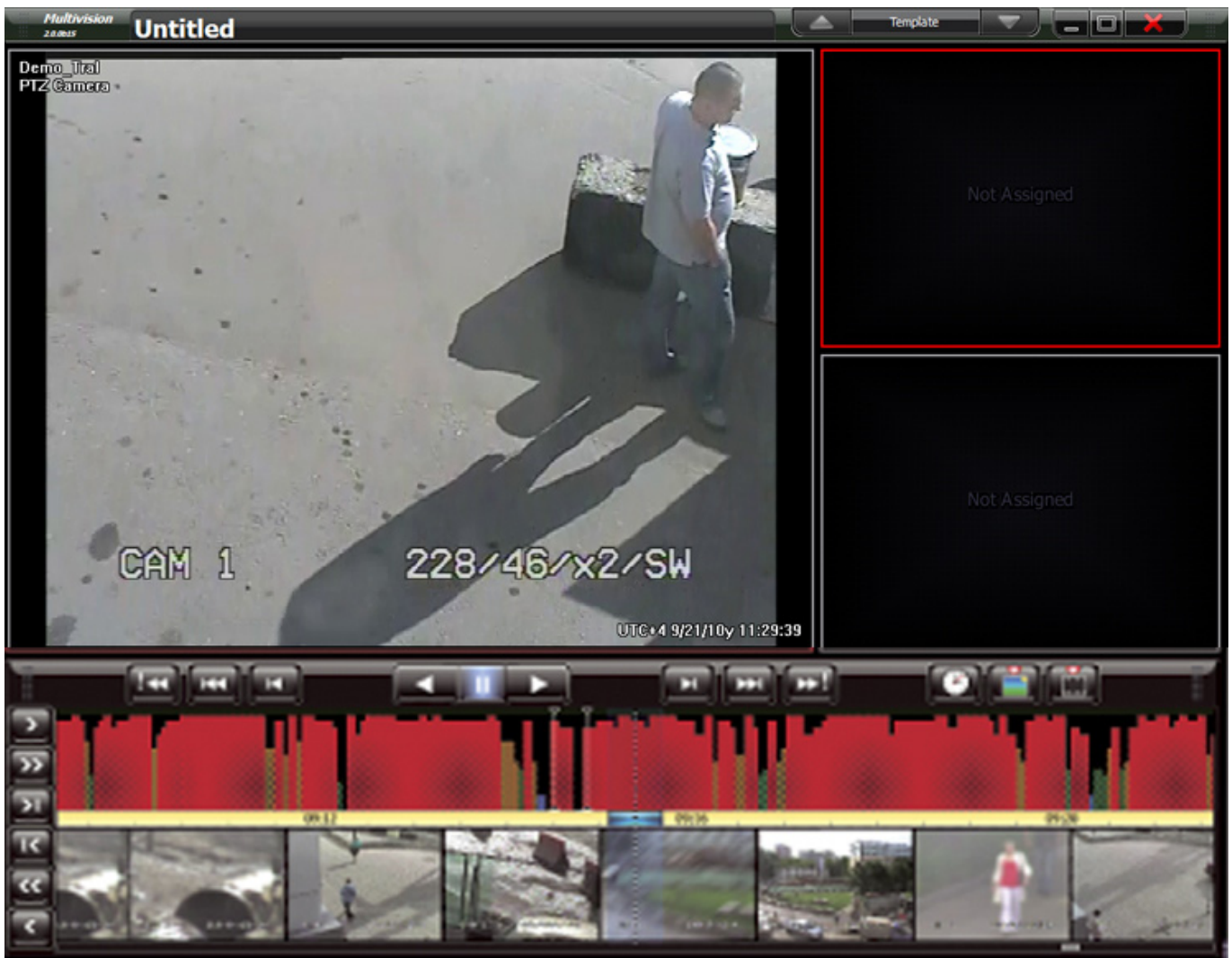
If the patten settings were changed during the work the program will offer to save the changed pattern. Select an action and the program will exit.

The program stores the last pattern and when launched again loads it automatically.

6.4.14. The program stores up to 10 last patterns. They are placed at the end of the menu functions list “Pattern”. Select a pattern from the list for loading into the program. You can also use Alt+num combination with num being a number of the pattern in the list.

7. Software for working with the archives MultiVision 2 – FilePlayer

The program is intended for remote viewing of the archives of the servers of the “Tral 5” series, as well as for working with saved fragments in *.msn3 format.



7.1. General notions and features of control elements.

- 7.1.1. **Window** – an area on the page where a server videoarchive or a map with a GPS-tie is displayed. Up to 8 windows can be displayed simultaneously depending on the page type.
- 7.1.2. **Active window** – the window highlighted red. When starting the program a window in the top-left corner will be active. To highlight the active window arrow keys or a single left or right click on the required window is used. The right-click activates the contextual menu used to change the window location on the page, to change the window tie and to set the server linked to the window.

- 7.1.3. **Page** – a set of windows simultaneously displayed on the screen. Page settings allow creating different page configurations most suitable for objects surveillance.
- 7.1.4. **Template** – a set consisting of several windows. The number of windows in the pattern can exceed that on the pattern page. In this case some of the windows are beyond the limits of the page. To move them in the scope the arrows to the left and to the right of the “Pattern” button or PgUp/PgDown keys are used. Pattern settings are saved in a configuration file in the *.xnv format.
- 7.1.5. **Control panel** – an area in the bottom of application window containing a time scale, timeline with preview, activity bargraph, scroll bar and buttons for navigation in the archive. The control panel contains information concerning the active window.
- 7.1.6. **Time scale** – a yellow horizontal bar in the centre of the control panel.



The current location of the archive is marked with an upright dashed line in the centre of the scale.

To scale set the mouse pointer at the scale, click on the left button and holding it move the mouse to the left or to the right. After selecting the required scale release the mouse button.

- 7.1.7. **Timeline** – a line with frames sampling from the archive.



The time of the frame corresponds to the position of its left border.

In case the recording was stopped for some time (for instance in conformity with motion detector settings) the timeline displays a clear frame.

To move to a required point of time make a single click on the timeline.

To “drag” the timeline use the left click and holding it move in the required direction.

- 7.1.8. **Bargraph** – it is used for navigation in the archive using the information about activity and events in the frame.



The length of the whole scroll bar corresponds to the archive size.
 The length of the thumb location corresponds to the current viewing range.
 To move make a single left click on the required point of the scroll bar or drag the thumb to a required place making the left click and holding it.

7.2. Navigation in the archive with buttons.



Switching an hour back or forward relative to the current position.



Switching a day back or forward.

Switching to the beginning or to the end of the archive.

Switching to the previous or the next event.

Switching a few seconds back or forward.

Switching to the previous or the next frame.



Playing back or forward. Each repeat click changes the playback speed (0.5x-1x-2x-4x-MAX)

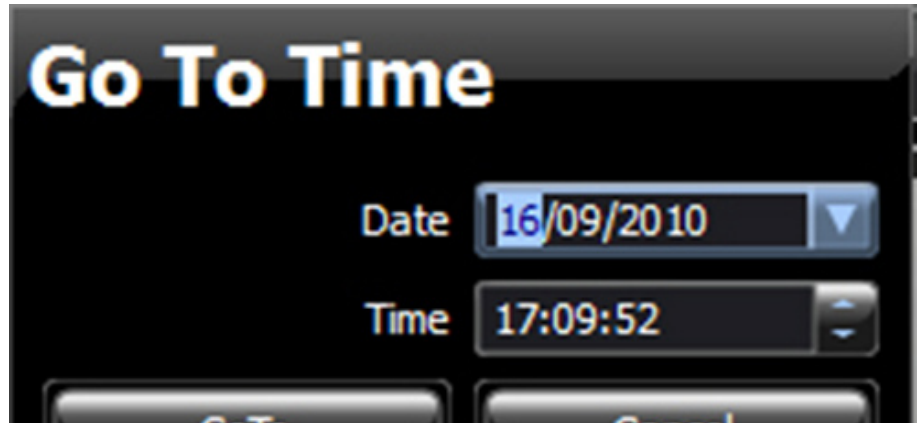


Switching pause/playback.

7.3. Switching to a specified time and date.




Click on the time switch button and in the dialog window set the required date and time and click on “Go to Time”.




7.4. Frame storage.

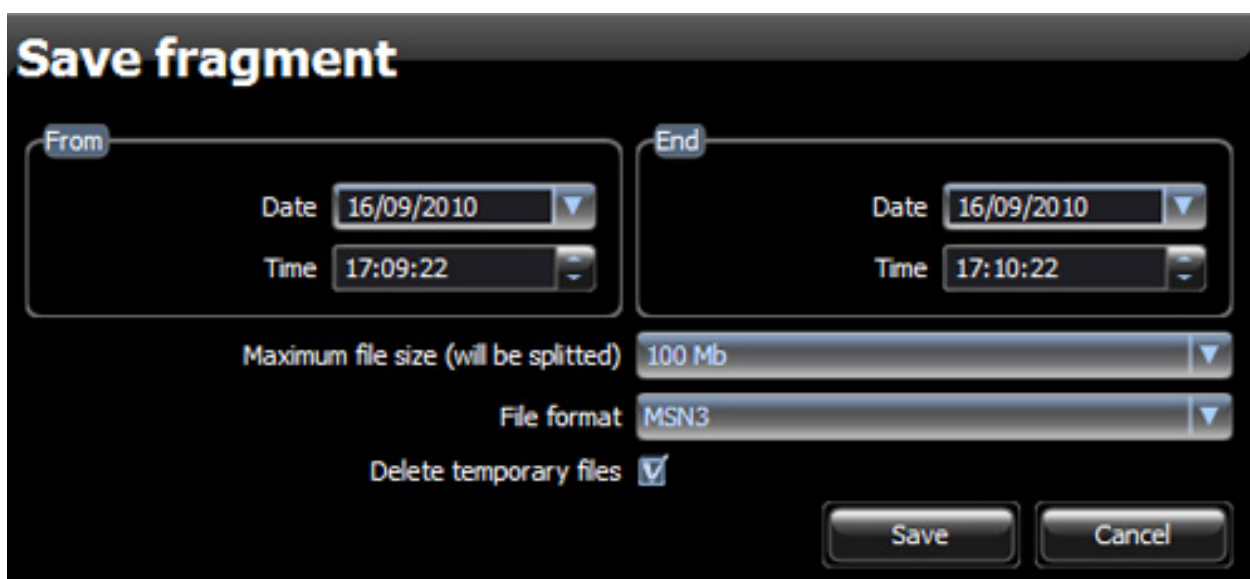


To store the active window frame click on button  and in the dialog window set the location and filename. On default the filename is molded as follows: YYYYMM-MDD – hhmmss.jpg. The saved file will have all captioning data visible in the active window.

When storing the current playback mode doesn't change, the frame is fixed while clicking on the button.

7.5. Recorded fragment saving.

To store the recording fragment in the internal *.msn3 format or *.avi format click on the button  and indicate the fragment parameters in the dialog.



- 7.5.1. **From/To fields** – indicate the date and time of the beginning and the end of the fragment. On default the fragment of +/- 30 seconds of the current position in the archive is stored. If the fragment was marked on the time scale the corresponding fields will be filled automatically.
- 7.5.2. **Maximum file size** – maximum file size when saving. If the fragment size exceeds selected value a new file of the following pattern will be created: YYYYMMDD-hhmmss. YYYYMMDD-hhmmss_NN.msn3 with NN being the file number.
- 7.5.3. **File format** – indicate the fragment saving format. When *.msn3 is selected all additional information including events and time markers is saved in the file.
- 7.5.4. **Delete temporary files** – tick to delete temporary files when saving in *.msn3 format.
- 7.5.5. **Selecting fragment on the control panel.**

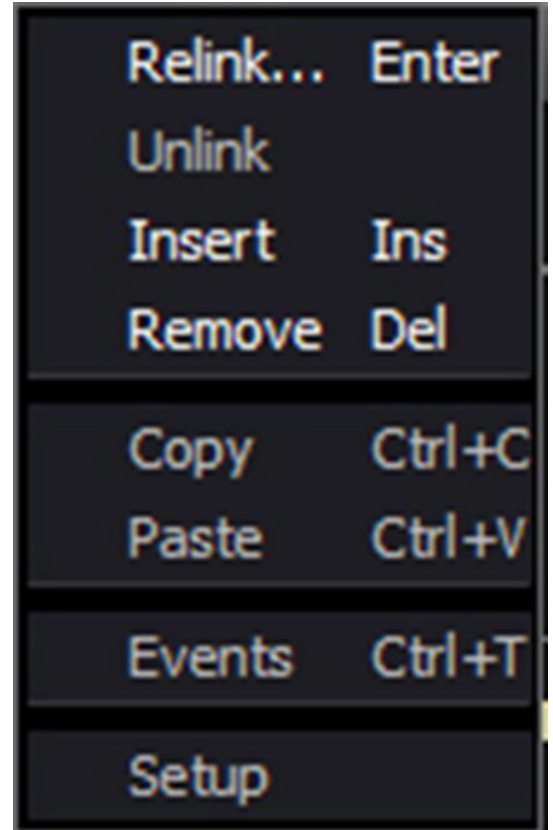


Saving range can be indicated on the control panel. Firstly, make a left-click on the time scale where the fragment starts and secondly, where it ends. The selected range will be highlighted. To cancel the selection make a left-click on any part of the scale.

7.6. Window contextual menu.

Make a right click to activate the window contextual menu. This menu allows setting window parameters and editing the pattern.

- 7.6.1. **Relink** – to activate the window tie dialog.
- 7.6.2. **Break the link** – to delete all settings of the active window tie. In the window without a tie “Not used” message is displayed.
- 7.6.3. **Paste a window** – to add the window without a tie.
- 7.6.4. **Delete a window** – to delete the active window from the page.
- 7.6.5. **Copy** – to copy the active window tie settings to the clipboard for the further paste.
- 7.6.6. **Paste** – to fill the active window tie settings from the clipboard. Inactive when the clipboard is empty.
- 7.6.7. **Events** – to activate the events list for the active window.



There is a list of subtitle channels available for displaying in the top of the window. Tick those to be shown in the list of events.

In the bottom of the window there is a list of events. The time, subtitle channel number and the name are shown for each event in the list. To sort the list use a single left click on the column header.

To filter the list according to the pattern a line above the events list is used. The search is possible if the line is included into the “Event” margin. To switch to the time of the event make a double left click on it.

The screenshot shows a window titled "Events" with two main sections. The top section is a table for selecting subtitle channels:

Channel	Description
<input checked="" type="checkbox"/> 128	Channel Subtitles
<input checked="" type="checkbox"/> 255	System Subtitles

Below this is a search bar. The bottom section is a list of events with columns for Time, Channel, and Event:

Time	Channel	Event
16.09.2010 17:31:46	128	Движение 0/839
16.09.2010 17:40:04	128	Движение 0/840
16.09.2010 17:40:07	255	Камера выключена
16.09.2010 17:40:10	255	Камера включена
16.09.2010 17:53:16	128	Движение 0/841
16.09.2010 18:02:46	128	Движение 0/1
16.09.2010 18:02:55	128	Движение 0/2
16.09.2010 18:40:13	255	Камера выключена

At the bottom right of the window are "Close" and "Jump" buttons.

- 7.6.8. Settings** – to activate the server-setting software hooked to the active window. Depending on the type of the hooked server an appropriate setting software is launched.

7.7. Window link to the network device.

Select the Tab “Device” to connect to the archive on the storage device connected directly to the server.

7.7.1. Address – enter the address of the server manually or select the server from a drop-down list of devices automatically found in a network local segment. Both forms of address either domain name or IP-address are acceptable.

7.7.2. Port – port number for an access to the server. Port 5049 is used on default.

7.7.3. Login/Password – login and password for access to the device. It is filled only if the authorization is switched on in the server settings.

To view the archive the access level is to be not lower than “View”. For safety reasons when inputting password symbols are replaced with points.

7.7.4. Video – select the video channel or GPS from the drop-down list. A map with additional information and ticked device current position will be displayed when selecting “GPS” with a connected GPS-receiver.

For reasons beyond our control in some cases the program fails to identify the server type automatically and a maximum possible number of channels is shown in the drop-down list.

7.7.5. Audio – select an audio channel linked with the active window. Different audio channels can be set for each window on the page. When working with the program only the audio channel hooked to the active window (i.e. highlighted red) is played.

7.7.6. Subtitles – tick the types of subtitles to be displayed in the window. All subtitles are selected on default.

The list of subtitles available for viewing is to be set in MultiVision – Options software in “Events” section. Program settings on default allow viewing all subtitles (of events) existing in a basic software versions of servers supported.

7.7.7. Click on “Ok” to record changes or “Cancel” to quit the tie dialog.



7.8. Window link to the file.

Select the Tab “File” to hook the window top the file in the *.msn3 format.

7.8.1. Path – indicate the file in the *.msn3 format that will be the source of the archive for the active window. Making the selection you can use the drop-down list of the last files opened or the button “View” to open the file selection dialog.

7.8.2. Video – select the video channel or GPS from the drop-down list. A map with additional information and ticked device current position will be displayed when selecting “GPS” with a connected GPS-receiver.

For reasons beyond our control in some cases the program fails to identify the server type automatically and a maximum possible number of channels is shown in the drop-down list.

7.8.3. Audio – select an audio channel linked with the active window. Different audio channels can be set for each window on the page. When working with the program only the audio channel hooked to the active window (i.e. highlighted red) is played.

7.8.4. Subtitles – tick the types of subtitles to be displayed in the window. All subtitles are selected on default.

The list of subtitles available for viewing is to be set in MultiVision – Options software in “Events” section. Program settings on default allow viewing all subtitles (of events) existing in a basic software versions of servers supported.

7.8.5. Click on “Ok” to record changes or “Cancel” to quit the tie dialog.



7.9. Window link to the directory.

Select the Tab “Catalog” to hook the window to the folder with files *.msn3. In this case the program will connect to the catalog as to an integrated archive and the files will be automatically switched while viewing subject to the current position in the archive. This mode is convenient when working with archives of the “Tral Auto”, “Tral M2/M3” servers or with the archive of “Tral 5” servers, which has been saved on the storage device, formatted in the FAT 32 file system or by the archive on the network drive.

7.9.1. Path – indicate the catalog with files in the *.msn3 format that will be the source of the archive for the active window. Making the selection you can use the drop-down list of the last files opened or the button “View” to open the file selection dialog.

7.9.2. Video – select the video channel or GPS from the drop-down list. A map with additional information and ticked device current position will be displayed when selecting “GPS” with a connected GPS-receiver.

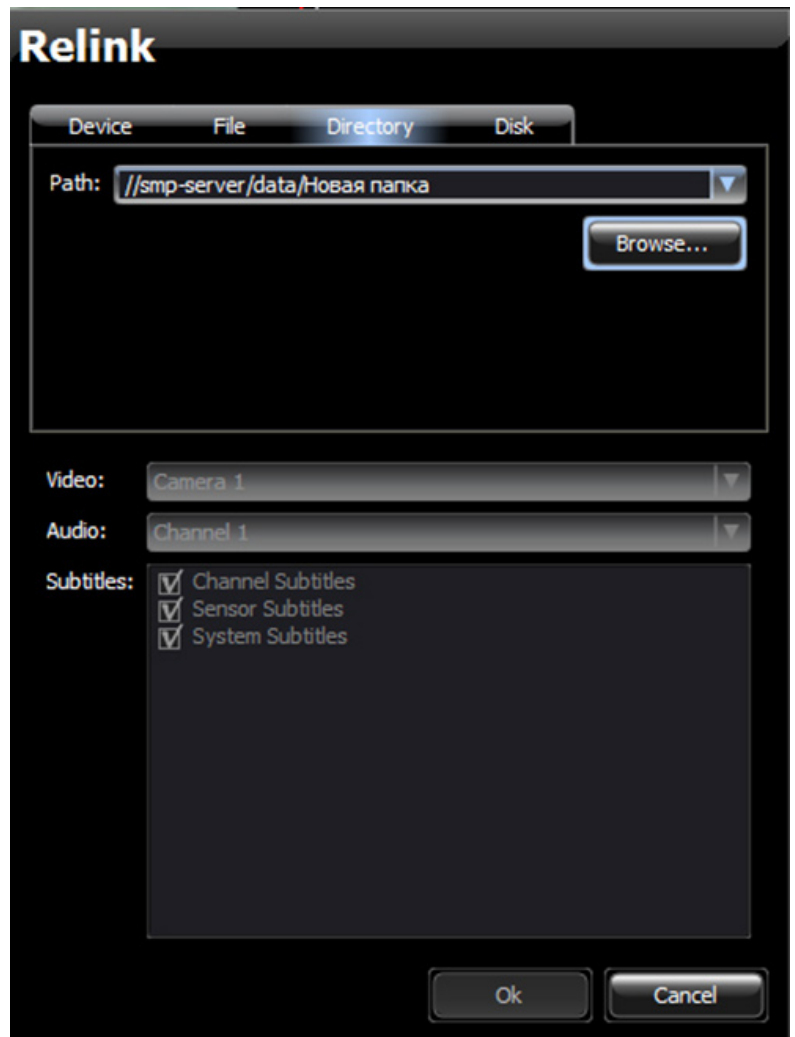
For reasons beyond our control in some cases the program fails to identify the server type automatically and a maximum possible number of channels is shown in the drop-down list.

7.9.3. Audio – select an audio channel linked with the active window. Different audio channels can be set for each window on the page. When working with the program only the audio channel hooked to the active window (i.e. highlighted red) is played.

7.9.4. Subtitles – tick the types of subtitles to be displayed in the window. All subtitles are selected on default.

The list of subtitles available for viewing is to be set in MultiVision – Options software in “Events” section. Program settings on default allow viewing all subtitles (of events) existing in a basic software versions of servers supported.

7.9.5. Click on “Ok” to record changes or “Cancel” to quit the tie dialog.



7.10. Window link to the disc.

Select the Tab “Disc” to hook the window to the archive on the USB-drive (USB-HDD, USB-Flash). This type of the tie works with archives of the “Tral 3” and “Tral 5” servers saved on the media with formatted means of the server in the EXT3 file system.

When connecting to a computer with Windows OS such discs are defined as devices with an “un formatted” or “unknown” section. Should the operating system offer to format the disk when connecting it to the computer you should refuse as all the data will be lost after formatting.

Enter the administrator system when working with such drives.

When connecting with limited license the discs will be inaccessible.

7.10.1. Path – from the drop-down menu select a disc identifier or click on “View” to search for the drives with archives of the servers automatically. The device identifier is a unique set of hexadecimal numbers which is assigned to the device by the operating system. The identifier can be changed when connecting one and the same disc to different ports and it is always changed when connecting another disc to one and the same USB-port.

7.10.2. Catalog – indicate the catalog on the disc that will be used as a source of the archive. In some cases (F.e. when using one disc to save archives of several Tral 5 devices) the archives of several devices can be found on the disc. Select a required server from the list.

7.10.3. Video – select the video channel or GPS from the drop-down list. A map with additional information and ticked device current position will be displayed when selecting “GPS” with a connected GPS-receiver.

For reasons beyond our control in some cases the program fails to identify the server type automatically and a maximum possible number of channels is shown in the drop-down list.

7.10.4. Audio – select an audio channel linked with the active window. Different audio channels can be set for each window on the page. When working with the program only the audio channel hooked to the active window (i.e. highlighted red) is played.



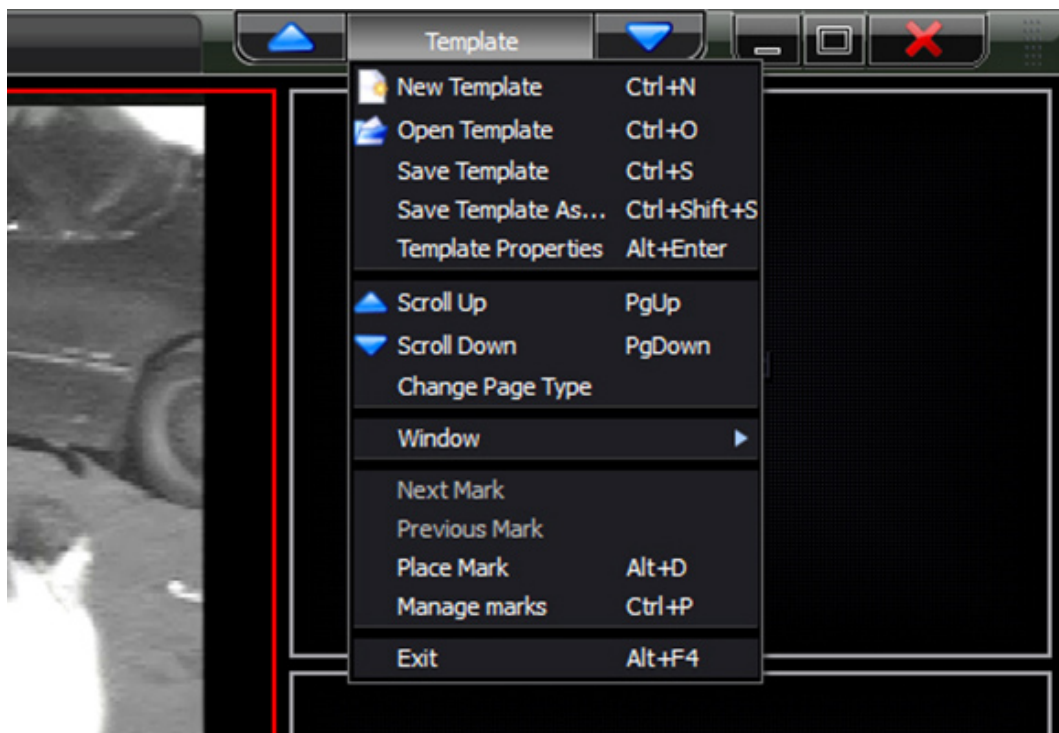
7.10.5. Subtitles – tick the types of subtitles to be displayed in the window. All subtitles are selected on default.

The list of subtitles available for viewing is to be set in MultiVision – Options software in “Events” section. Program settings on default allow viewing all subtitles (of events) existing in a basic software versions of servers supported.

7.10.6. Click on “Ok” to record changes or “Cancel” to quit the tie dialog.

7.11. Menu “Template”.

This menu is activated by clicking on the “Pattern” button and is intended for setting the pattern and page parameters and operating the tabs.



7.11.1. A new template – click on to create a new pattern. A clear pattern consisting of 4 windows is created on default.

If the active pattern was changed before creating a new one the program will offer saving the configuration. Select a required action and continue work.

7.11.2. Open a template – to open the previous saved pattern. You will be offered to select a *.xpf file.

7.11.3. Save a template – to save the changed pattern into a source file. You will be offered to indicate a new name for the new pattern.

7.11.4. Save a template as... – to save the active pattern into a new file. You will be offered to select the location and filename with .xpf extension. All settings of windows and pages will be saved in the file (including authorization and channel tie parameters, etc.)

7.11.5. Template properties – to show the tree form pattern structure. In the “Pattern Features” window the structure of the active pattern is demonstrably presented. A preview in the static frame form, the net name of the device, its type, and some settings are displayed for each window.

To start viewing the required window highlight it in the list and click on “OK”.

FilePlayer will switch to viewing the selected window.

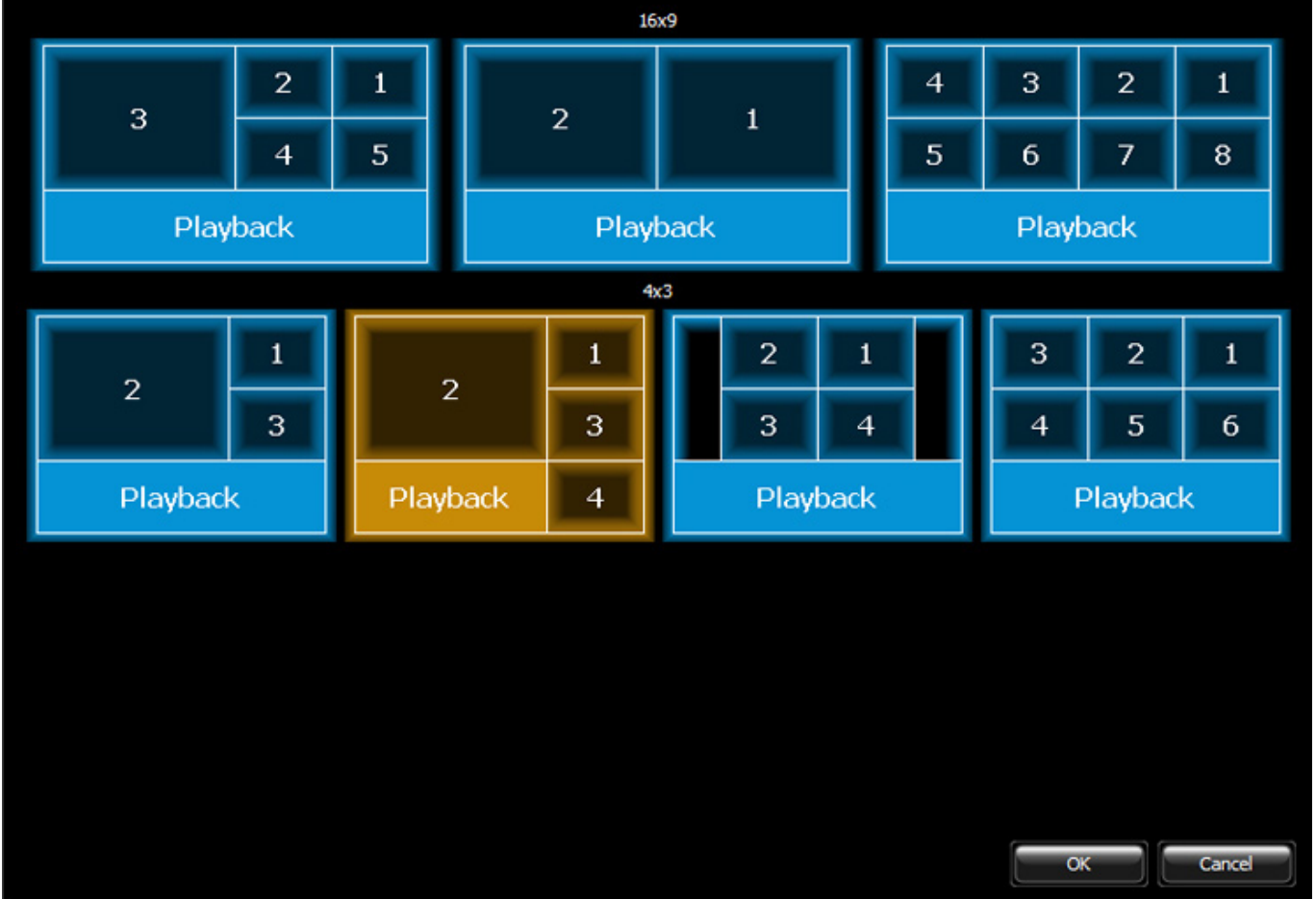
7.11.6. Previous/Next Source – to move the windows on the page. It is used when there are more windows in the pattern than can be fitted into a page. In this case some of the windows are beyond the limits of the page.

Keys to the right and to the left of “Pattern” or PgUp/PgDown keys can be also used for moving such windows. To move them in the scope the arrows to the left and to the right of the “Pattern” button or PgUp/PgDown keys are used.

7.11.7. Change the page type – to change the pattern active window. You will be offered several variants of pages with various number and location of pages.



Select the page type



Select the page type and click on “OK” to change or “Cancel” to quit the window.

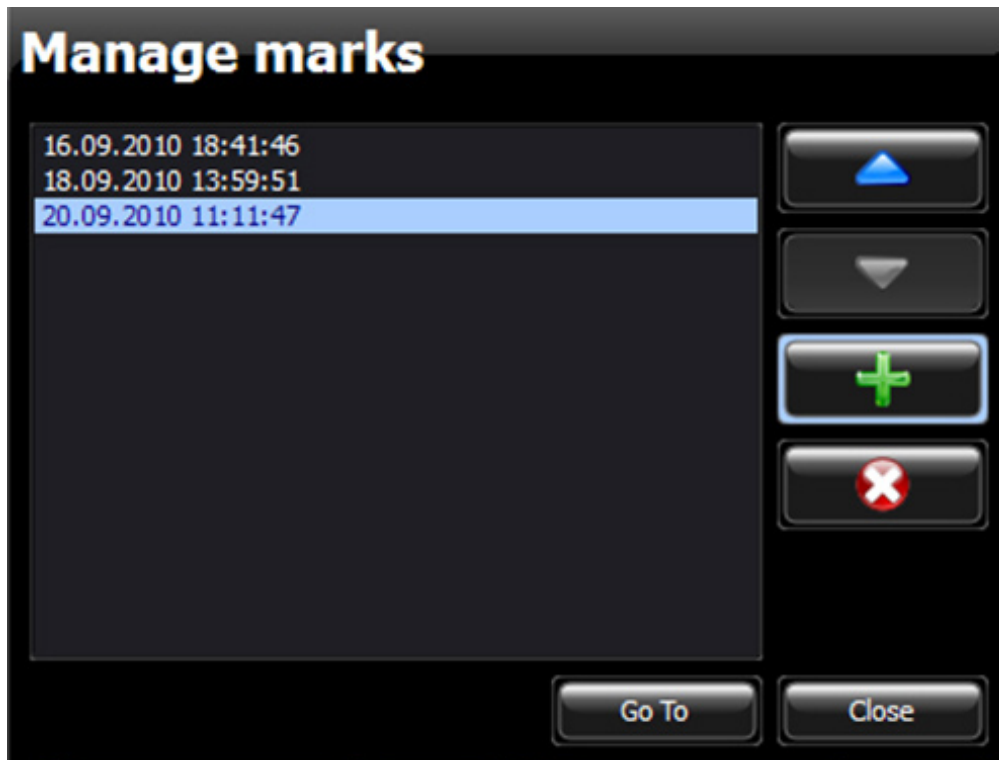
If a new page type contains less windows than the active one the windows not fitting into the page will be moved outside the scope and their viewing will be possible when using the “Previous/Next Source” function.

7.11.8. Window – menu for active window managing. It is an absolute duplicate of the active window contextual menu.

7.11.9. Previous/ Next Tab – to switch quickly between the tabs. The tabs are created with the help of the “Put a Tab” function.

7.11.10. Add a Tab – to add a Tab with the current time to the tab list.

7.11.11. Manage Marks – to open a tab list window.



There is a corresponding line in the list for each tab.

Use arrow keys to move the tabs up/down the list.

The “+” button adds a tab with the current position in the archive to the list.

The “X” button deletes the selected tab from the list.

To move to the selected tab make a double left-click on it.

7.11.12. **Escape** – select to quit the program. You also can use Alt+F4 combination.

If the patter settings were changed during the work the program will offer to save the changed pattern. Select an action and the program will exit.

The program stores the last pattern and when launched again loads it automatically.

7.11.13. The program stores up to 10 last patterns. They are placed at the end of the menu functions list “Pattern”. Select a pattern from the list for loading into the program. You can also use Alt+num combination with num – being a number of the pattern in the list.