Accellence Technologies GmbH

Universal Video Management System

vimacc System Documentation

vimacc Workstation User Manual

Legal Notice

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Table of Contents

List of Abbreviations

ASCII	American Standard Code for Information Interchange
AAC	Advanced Audio Coding
AES	Advanced Encryption Standard
CA	Certificate Authority or Certification Authority
CCTV	Closed Circuit Television
DB	Database
DCOM	Distributed Component Object Model
DVR	Digital Video Recorder
IP	Internet Protocol
iSCSI	Internet Small Computer System Interface
GUI	Graphical User Interface
GOP	Group of Pictures
HID	Human Interface Device
LDAP	Lightweight Directory Access Protocol
MMI	Man Machine Interface
NAS	Network Attached Storage (Fibre Channel, iSCSI, …)
NFR	Non-functional Requirement
NTP	Network Time Protocol
NVR	Network Video Recorder
OPC	OLE for Process Control
RFC	Request for Comments
RTSP	RealTime Streaming Protocol
PTZ / SNZ	Pan Tilt Zoom
PKCS	Public Key Cryptography Standards
PKI	Public Key Infrastructure
SAN	Storage Area Network (CIFS, NFS, SMB, etc.)
SAS	Serial Attached SCSI
SDP	Session Description Protocol (see RFC 4566)
SHA	Secure Hash Algorithm
SQL	Structured Query Language
SRTP	Secure Real-Time Transport Protocol
SSD	Solid State Drive
SSL	Secure Sockets Layer
SW	Software
TCP	Transmission Control Protocol
UDP	User Datagram Protocol

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1 Introduction

1.1 Document Purpose

This document is part of the system documentation of the **vimacc**® video management system from Accellence Technologies GmbH.

It describes the functions of the **vimacc**® workstation as a user interface. The usage elements can be shown or hidden via the User and Rights Management and are thus not always available (see **vimacc**® Administrator's Guide).

1.2 Documentation Structure

The **vimacc**® system documentation comprises several documents dealing with different sub-aspects.

The following documents are available by default:

- **vimacc**® System Documentation: Introduction
  Overview of the general features and respective fields of application

- **vimacc**® System Documentation: Features and Characteristics
  Detailed description of technical performance parameters and features/characteristics.

- **vimacc**® System Documentation: Interfaces
  Description of external interfaces, e.g. to connect to higher level management systems

- **vimacc**® System Documentation: System Requirements
  Information on minimum requirements for hardware and operating system

- **vimacc**® System Documentation: System Design
  Conditions to be met when planning a video system and assistance with dimensioning the complete system

- **vimacc**® System Documentation: List of Video Sources
  List of available video sources (cameras, encoders), drivers and other connectable peripherals

- **vimacc**® System Documentation: Architecture
  Detailed overview of the architecture (internal document)

1.3 vimacc Editions

The video management software **vimacc®** is provided in different versions which differ in function scope and operation purpose.

vimacc® Professional
- video management system for installation on a single server or PC
- supports up to 64 cameras in full resolution and with full framerate (requires appropriate hardware equipment)
- up to 2 additional, standalone workstations
- simultaneous display of live, playback and alarm videos as well as maps
- unlimited number of monitors per workstation
- stores videos in original format
- export of videos to CD/DVD or USB incl. metadata
- integrated video wall functions
- time-synchronized playback at up to 1000 times the normal speed
- 100-fold digital zoom in live and playback videos
- interactive and stackable maps
- private zone masking with 2 security levels
- video system control via HTTPS or TCP SDK
- audio recording/playback

vimacc® Enterprise
- supports all **vimacc®** Professional functions
- number of cameras and workstations not limited by software
- decentralized installation of vimacc processes possible
- server/service redundancy and load balancing
- can be integrated into domain infrastructures like Active Directory
- can be connected to external systems (e.g. guide systems, Interkom)

vimacc® OA video subsystem for SCADA systems like SIMATIC WinCC OA
- supports all **vimacc®** Enterprise functions
- No user interface for operation. Integrates completely and transparently into a higher level SCADA system.

vimacc® Parking is a special edition for car park operators
- supports all **vimacc®** Enterprise functions
- deep integration with Commend/Schneider intercom systems incl. speech channel and door/gate control

vimacc® Safe Office for office environments with increased risk potential
- supports all **vimacc®** Enterprise functions
- supports alarm sensors to activate silent alarms
- automatic display of alarm images in neighbouring offices and/or at security services

vimacc® Visitor Management for active guidance of persons within buildings
- supports all **vimacc®** Professional functions
- additionally: direct two-way communication with respective cameras

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2 Start Options

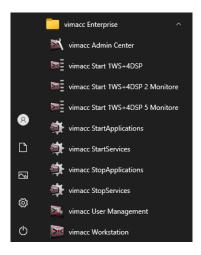After installation the start menu offers the following options:

Figure 2-1: Start menu after installation

➢ **vimacc Admin Center**
As of **vimacc®** 2.0, the system is technically managed by the vimacc Admin Center. In the center, hosts, services, cameras, and devices are managed and configured (see Administrator's Guide).

➢ **vimacc Start 1WS+4DSP, 1WS+4DSP 2 monitors, 1WS+4DSP 5 monitors**
Starts the workstation und 4 display processes on 1, 2, or 5 monitors.

➢ **vimacc Start Services / Stop Services**
Starts/stops the vimacc services.

To start and stop services administrator rights are required.

➢ **vimacc Start Applications / Stop Applications**
Starts/stops all vimacc applications (e.g. workstation, display, systray, …).

➢ **vimacc User Management**
Administration of users, user groups and system rights (see Administrator's Guide).

➢ **vimacc Workstation**
Starts a workstation.
Several workstation processes can be started on a PC/server and individually parameterised (see Administrator's Guide).

3 vimacc Workstation

The **vimacc® Workstation** is the central user interface of the video management system. Here, live videos can be displayed, recordings (archive) can be reviewed and alarm images can be checked. The user can establish connections to the available monitors of a video wall and display the data in the *Video Output pane*. For optimum operating procedures, scenarios and sequences can be individually configured and previously recorded key video data can be exported.

The application window of the **vimacc® Workstation** is divided into 6 panes:

1:    *Toolbar*

2:    *Video Wall control pane*

3:    *Navigation pane*

4:    The *Video Output pane* consists of up to 32 video dialogs.

VD 1: *Video dialog 1 (top left)* …   VD 6: *Video dialog 6 (bottom right)*

5:    *Control pane*
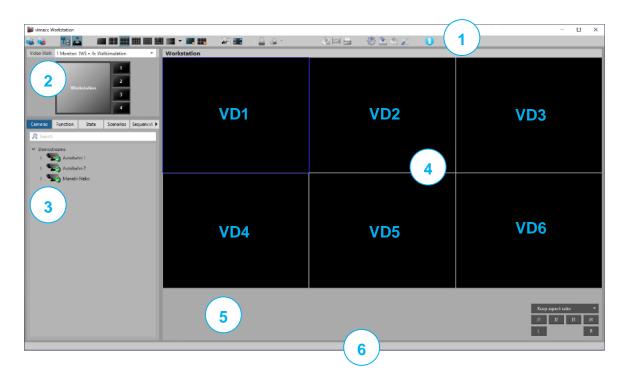
6:    *Status bar*

Figure 3-1: Main application window

vimacc® supports a complex rights management system. Depending on the system rights configured for a user, different usage elements are provided.

3.1 Toolbar

The *Toolbar* contains several buttons for the user to quickly hide/show components in the window, change the display mode of the *Video Output pane* and open the *Export* or *Configuration dialog*.
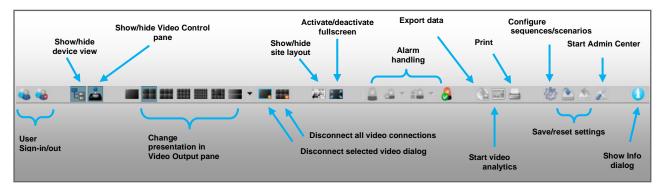

Figure 3-2: Toolbar

The toolbar contains the following buttons:

	Sign in user	
	Sign out user	
	Show/hide device view – Shows/hides *Navigation pane* and *Video Wall control*.	Shortcut: **CTRL+N**
	Show/hide Video Control pane – Shows/hides *Video Control* below *Video Output*.	Shortcut: **CTRL+S**
	Set 1x1 display – Changes the display of the *Video Output pane* to 1 video dialog.	Shortcut: **CTRL+1**
	Set 2x2 display – Changes the display of the *Video Output pane* to 4 video dialogs.	
	Set 2x3 display – Changes the display of the *Video Output pane* to 6 video dialogs.	
	Set 3x4 display – Changes the display of the *Video Output pane* to 12 video dialogs.	
	Set 4x6 display – Changes the display of the *Video Output pane* to 24 video dialogs.	

Set 1+8 display – Changes the display of the *Video Output pane* to 9 video dialogs.

Disconnect selected video dialog – Terminates the video connection of the selected active video dialog to the vimacc interface.

Shortcut:
SHIFT+X

Disconnect all video connections – Disconnects the connections of all displayed video dialogs to the vimacc interface.

Shortcut:
CTRL+X

Show/hide map – Shows the map on the entire *Video Output pane*.

Shortcut:
CTRL+M

Fullscreen – Toggles between usage elements ON / OFF.

Shortcut:
CTRL+F

Manual alarm – Manual alarm triggering by user.

End of alarm – Terminates an alarm.

Return alarm into queue – Returns the active alarm to the alarm queue.

Alarm queue: Toggle Show all alarms / Show new alarms only

Export– Opens the *Export dialog* to export recorded video data.

Video analysis – Opens the *Video analysis dialog* to execute an image analysis of recorded video data.

Print – Prints a still image of all video dialogs shown.

Configuration dialog – Opens the *Configuration dialog* to configure sequences and scenarios.

Save settings – Saves the current workstation parameters (size, position, monitor number, etc.).

Reset settings – Resets the parameters to the settings from the configuration file (see Administrator's Guide).

System configuration – Starts the application to configure the entire **vimacc**® system.

System information – Opens the *Info dialog* with the current version numbers as well as OpenSource and licence information.

Figure 3-3: Info dialog – About / License agreement / License information

Depending on the User and Rights Management configuration the number of elements in the toolbar may vary.

Elements currently not available are greyed out.

3.2 Video Wall Control

The Video Wall control shows externally arranged vimacc display processes (workstation, display) or external video wall controllers of third party providers (e. g. EIZO, eyevis).

Video streams can by directly connected from the camera tree to available display processes via drag & drop.
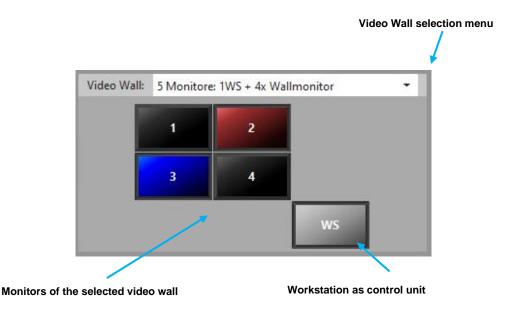

Figure 3-4: Video Wall control

Each monitor displayed functions similar to a button. The colour indicates the status of a monitor.

The following colours are used:

- Black   available for Video Wall control

- Blue   synchronous mode with workstation

- Red   connection failure

- Grey   not configured / no remote control

For more information about the Video Wall control see chapter 3.5.7.

3.3 Navigation Pane

The *Navigation pane* consists of several tabs:

- Cameras
- Function
- State
- Scenarios
- Sequences
- Map
- Alarms
- Text Marks
- Delete Protection

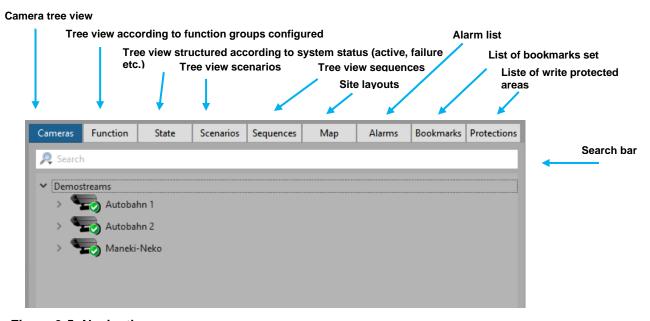These tabs enable direct access to the main functions of the **vimacc® Workstation**.

Camera tree view

Tree view according to function groups configured

Tree view structured according to system status (active, failure etc.)

Tree view scenarios

Tree view sequences

Site layouts

Alarm list

List of bookmarks set

Liste of write protected areas

Search bar

Figure 3-5: Navigation pane

> The visibility of individual tabs can be restricted by configuration in the User and Rights Management.

All tabs of the Navigation pane provide a search bar.
By entering a search term or just part of it the display results can be filtered accordingly.

Filtered search results are highlighted. All search results can be directly displayed by drag & drop.

3.3.1 Cameras Tab

This tab contains the tree view of all cameras of the video management system stored in the central **vimacc®** configuration database that have been made available to the logged in user in the User and Rights Management. It is sorted alphabetically. Cameras are shown with their configured names and a camera symbol that represents type (Fix or PTZ) and status (see Figure 3-5).

For the **vimacc® Workstation** the following camera symbols are used:

Fix camera, this camera supports no PTZ functions.

PTZ camera, this camera supports PTZ functions.

The different states of the camera are presented as follows:

Camera is active and operated. Streaming data connection is working. When configured, the data is recorded.

The system detected a camera error. Live video images cannot be retrieved. Recorded video data are still accessible.

In the system, the camera is configured "on demand". Video data is not retrieved until a camera is connected.
After connecting, the status changes from green to red.

The camera is temporarily out of operation. Live video images cannot be retrieved. Recorded video data are still accessible. Details can be checked by right clicking an element in the camera tree.

Figure 3-6: Camera info overview

Missing licences, unassigned user rights or an interrupted connection to the **vimacc®** database may change the display in the camera tree.

Depending on configuration, subentries for live video, archive (playback) or both are displayed below a camera node.
The subentries are then also visible in the "Function" and "State" panes.

Figure 3-7: Cameras tab

For more information about connecting cameras see chapter 3.5.

3.3.2 Camera Sets Tab

The **vimacc**® **Workstation** can be configured in a way that a tab for Camera Sets is added to the navigation pane. Camera Sets consists of multiple cameras whose video streams are stitched together into a single video image. It can then be displayed on any video dialog like an ordinary video stream. This function can be made available via the User and Rights Management.
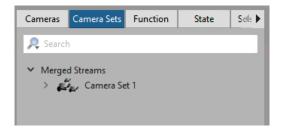

Figure 3-8: Camera Sets tab

For more information about Camera Sets see chapter 3.5.8.3.

3.3.3 Function Tab

This tab allows for an alternative camera sorting. Depending on the camera, additional parameters can be defined during configuration leading to a respective sorting of cameras in the group defined.
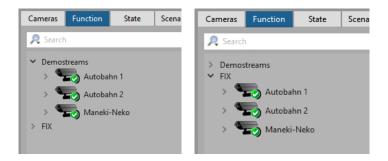
Figure 3-9: Camera tab – function groups

3.3.4 State Tab

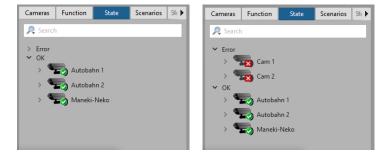On the "State" tab, the cameras are grouped according to system status. The display cannot be changed by the customer.

Figure 3-10: State tab

3.3.5 Scenarios Tab

A scenario in the context of the **vimacc**® **Workstation** is the connection of several cameras or sequences to the monitors of a video wall or to a **vimacc**® **Workstation.** The number of cameras or sequences in a scenario is not limited.
The "Scenarios" tab displays a *tree view* of all scenarios configured in the configuration database. Scenarios are sorted in alphabetical order.
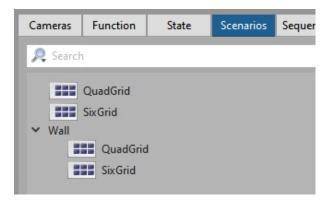

Figure 3-11: Scenarios tab

For more information about configuring scenarios see 3.5.8.2.

3.3.6 Sequences Tab

A sequence in the context of the **vimacc® Workstation** is a method to display cameras in a previously defined order on a video wall monitor or **vimacc® Workstation**.
The "Sequences" tab displays a tree view of all configured sequences generated in the configuration database. Sequences are sorted in alphabetical order.
When connecting sequences, additional control elements are displayed in the control pane. They can be used to start or stop sequences (see chapter 3.5.4).
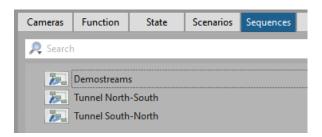

Figure 3-12: Sequences Tab

For more information about configuring scenarios see 3.5.8.1.

3.3.7 Map Tab

The Map tab provides a geographical overview of the camera arrangement. Maps and room plans also ensure for a quick overview of the available cameras and their viewing direction within buildings.

Maps can be accessed in three ways:
- Navigation pane, tab "Map"
- Connecting maps to a video dialog
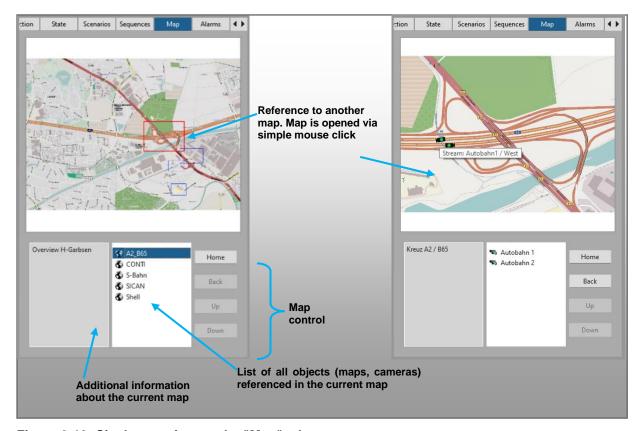- Activating map functions via toolbar

Figure 3-13: Site layout view on the "Map" tab

By double clicking an element in a map (camera, I/O contact, scenarios, sequences) it will be connected to the active video dialog.

The elements can also be connected to a video dialog or the Video Wall control element by using drag & drop.
In case of switching elements for I/O contacts, the respective outputs can be turned on or off.

For more information about using maps see 3.6.

3.3.8 Alarm Tab

This tab contains a tree view of all completed alarms in the search area defined.
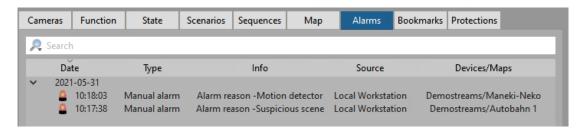
The table can be sorted by clicking the headers.

Figure 3-14: Alarm tab

With the context menu of the right mouse button, the alarm display can be parameterized and the search area can be set:
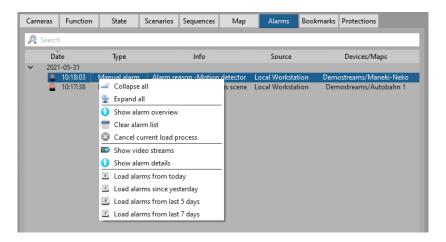

Figure 3-15: Alarm tab, parameters

After a workstation has been started, the alarm list is empty. When historical alarms are required, the respective time period can be loaded manually.

By double clicking an entry in the Alarm list, the camera recordings linked to the alarm are displayed in the Video Output pane.
If no video data is available for an alarm, a respective message appears.

For more information about editing alarms see 3.7.

3.3.9 Text Mark Tab

This tab contains a tree view of stored text marks in the search area defined.

The table can be sorted by clicking the headers.

Figure 3-16: Tab display of text marks

With the context menu of the right mouse button, the display can be parameterized and the search area can be set:
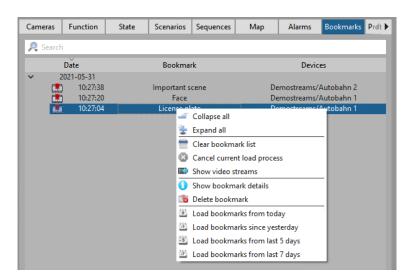

Figure 3-17: Text mark tab, parameters

After a workstation has been started, the list is empty. When historical data is required, the respective time period has to be loaded manually.

By double clicking an entry in the text mark list, the camera recordings linked to the text mark are displayed in the Video Output pane.
If no video data is available for the text mark selected, a respective message appears.

For more information about using text marks see chapter 3.5.6.

3.3.10   Delete Protection Tab

This tab contains a list of recording areas protected from being overwritten during automated archive adjustment.
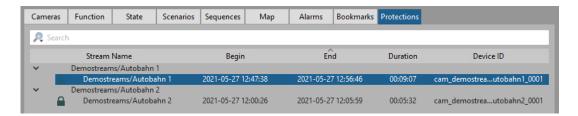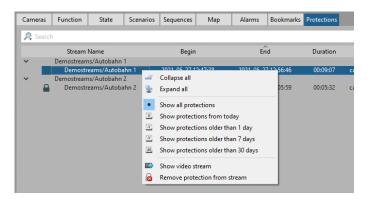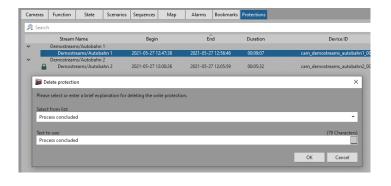

Figure 3-18: Delete Protection tab

The list is sorted alphabetically according to the camera names and can be adjusted by clicking a table header.

Figure 3-19: Editing delete protection

Right clicking a table area opens a context menu for configuring and removing the delete protection of a selected entry.

Figure 3-20: Undo delete protection

When a delete protection is removed, a respective comment on the reason has to be made. The operation will be logged.

For more information about the delete protections of streams see 3.5.3.3.

3.4 Video Output Pane

3.4.1 Basic Functions

The *Video Output pane* displays live streams, previously recorded video images (archive), alarm streams and/or maps. They can be combined any way.

When clicking in the view range of a video dialog the dialog status is set to "active" and additional elements are displayed in the control pane, if available.
A selected video dialog is shown with a blue frame (see Figure 3-21: Video Output pane with active video dialog at the top left).
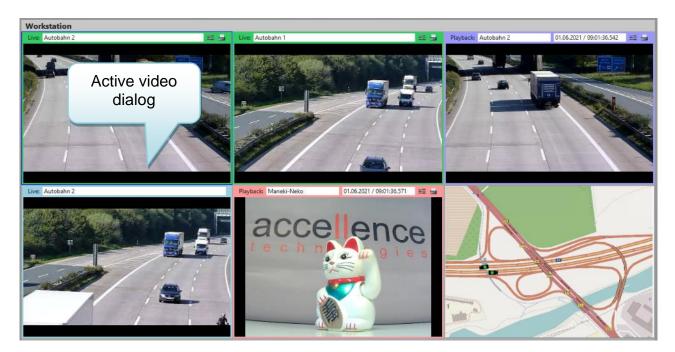

Figure 3-21: Video Output pane with active video dialog

The *Video Output pane* can be divided into several video dialogs. Depending on product version, different variants are supported respectively activated/deactivated via access rights.

The display grid can be selected via hotkeys or toolbar elements.

Figure 3-22: Grid selection

- **Green**   Live video connection
- **Purple**   Playback of recorded video data
- **Light blue**   Live video connection within a connection sequence
- **Pink**   Pre-alarm track display in case of an alarm

3.4.2 Special "Alarm Queue" Function

Optionally, video dialog 1 (top left) can be reserved for alarm processing using the User and Rights Management. The dialog will then be marked with a white frame and is no longer available for regular connection operations (see Figure 3-23: Video Output pane – alarm queue).
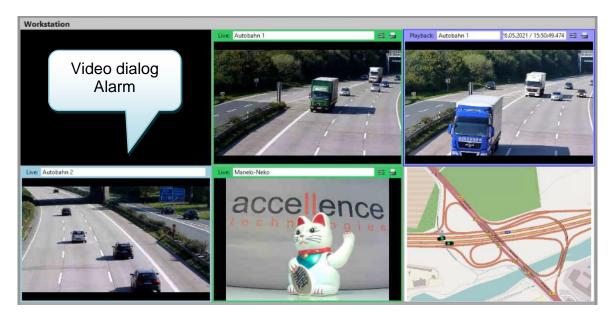

Figure 3-23: Video Output pane – alarm queue

In the alarm queue, up to 9 alarms can be directly displayed as live image (preview). If further alarms are queueing, the respective number will be displayed at the bottom right.

Figure 3-24: Alarm queue with live images

For more information about alarm queues see chapter 3.7.

3.4.3 Special Displays in the Video Dialog

Encrypted systems display video images only when the user has the required rights as well as a Crypto Dongle plugged into the workstation.

Figure 3-25 shows what is displayed when the Crypto dongle is missing.

Figure 3-25: View of encrypted camera streams without connected dongle

If the connection to the camera is interrupted, an error screen displays in the respective video dialog (see Figure 3-26.)
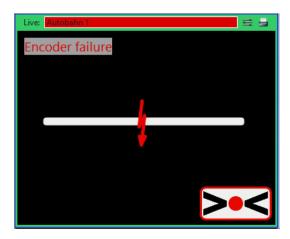

Figure 3-26: Video dialog with error screen

3.4.4 More Additional Functions

Depending on the user rights assigned, each video dialog may have additional buttons for special functions.

Figure 3-27: Additional video dialog functions

3.4.4.1 Printing a Still Image

This button opens a dialog for printing and exporting a still image of the current video dialog.

The image can either be printed on a system printer or stored as PDF, JPG or PNG file. Installation of a PDF printer is not required.

Figure 3-28: Printing a still image

3.4.4.2 Image Controller

The Image Controller icon can be used to show adjusters for improving image quality.

Changes made to brightness, contrast, saturation and colour shade can be stored as video stream presets. These presets are then valid for live and playback videos.

Presets are stored in the profile of the user that is logged in to the operating system. Thus, each user can save his own preferred display settings.

When adjusters are shown they do not overlap with image data.

Figure 3-29: Image Controller

3.4.4.3 Audio Functions

Audio streams have to be configured in the Admin Center separately.

For each video stream an audio channel can be assigned directly which will be automatically activated when the stream is connected. The stream does not have to be from the same camera.
Sharing rights must have been respectively granted in the User and Rights Management before.

If an audio channel is assigned to a stream, additional buttons for mute and PTT (Push to Talk) are displayed as well.

Additional symbols for audio functions:

Mute: The sound output via the PC's loudspeaker can be deactivated using the "Mute" function. Volume is controlled via the volume controller of the operating system.

PTT function: The PC's microphone is off by default. When the button is selected, the microphone becomes activated and the user can speak directly to/into a protection object (room, building, area, etc.)

When using audio functions the respective legal conditions have to be observed.

3.4.4.4 Zooming within a Video Dialog

By turning the mouse wheel, the user can zoom in and out of a video dialog. The zoom area is centred with respect to the current mouse pointer position on the map.

By pressing the mouse wheel and simultaneously moving the mouse the zoomed video image can be moved back and forth in the presentation window.

The "Zoom" function is available for video streams (live / archive / alarm) and maps.

The current zoom factor is displayed on the top right of the image (see Figure 3-30).
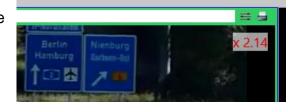
Figure 3-30: Zoom factor

3.5 Working with Video Streams

One of the main tasks of the user is to display video data of a certain camera in the *Video Output pane* of the vimacc Workstation**,** on another monitor or a video wall.

Depending on the access rights granted the camera tree may have up to two subentries per camera:
- Live: Live Stream
- Archive: Recording data of the camera

3.5.1 Connecting/Deleting Video Streams

Streams can be linked in several ways. The connecting process for live and archive streams is identical:

1. Connecting via double click
   - Select the video dialog in which the video should be shown. The video dialog becomes "active" and is marked with a blue frame (see Figure 3-31: Connecting cameras)
   - Using the left mouse button double click the respective stream to connect the video.

2. Connecting via drag & drop
   - Select the respective stream with the left mouse button and drag the camera to the video dialog required.
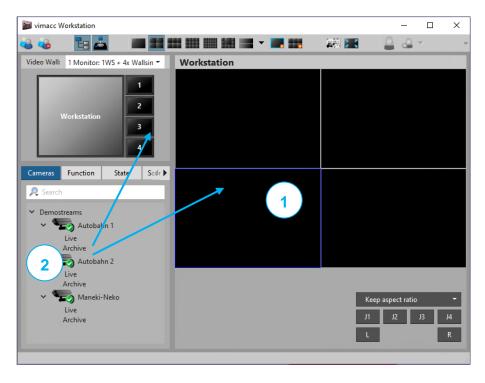   - When you release the mouse button the video is activated.

Figure 3-31: Connecting cameras

To select and connect several cameras at once the following two keyboard shortcuts can be used:

- CTRL-key
  With the CTRL-key pressed you can select further cameras and connect them via drag & drop.
- SHIFT-key
  When the SHIFT-key is pressed, all cameras, from the first camera selected to the camera clicked, are highlighted and can be connected simultaneously.

Marked cameras can also be directly connected to the video control via drag & drop (see Figure 3-31: Connecting cameras).

For more information about the Video Wall control see chapter 3.5.7

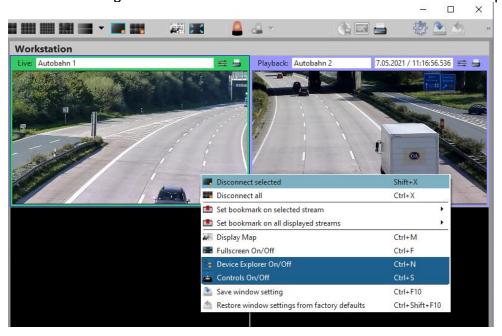To remove camera images from the workstation view several methods are supported.

Figure 3-32: Removing videos from the view

A selected (active) video dialog can be removed via:
- the toolbar button for deleting a video dialog
- the SHIFT+X keyboard shortcut
- the context menu of the right mouse button above the video dialog

Optionally, all connected videos can be deleted via:
- the toolbar button for deleting all video dialogs
- the CTRL+X keyboard shortcut
- the context menu of the right mouse button above the video dialog

3.5.1.1 Connecting Streams via Keyboard or Keypad

When available, video streams, scenarios, and sequences can easily be connected to the workstation or a display process using the keyboard or a keypad, e.g. the Axis T8312, instead of the mouse.

For this, a search criteria can be entered in the search bar of the respective tab and confirmed with **ENTER**. Matching entries will be displayed and highlighted. Then, after the shortcut **CTRL+ENTER** is pressed, the icon of the search bar will change from the usual magnifying glass to a stylized monitor. Now the target monitor on which the stream will be displayed can be picked. Here the number of the monitor as shown in the *Video Wall Control* pane needs to be entered in the search bar followed by **ENTER**, with '0' being the number of the workstation itself.
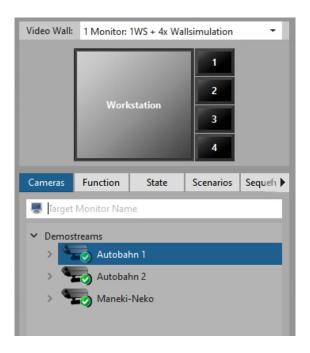

Figure: 3-33: Target monitor can be selected

Afterwards, the desired video dialog of the target monitor needs to be selected. For this, the icon in the search bar changes to a stylized grid, similar to the look of the Video Output pane.
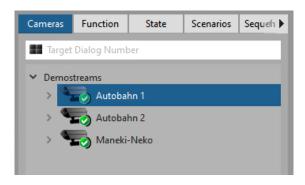

Figure 3-34: Target video dialog can be selected

When the target video dialog is chosen and confirmed with **ENTER**, the selected stream(s) will be connected.

In the case solely the keypad is to be used for this task, the Admin Center features a way to configure the keys of the keypad that allows to automatically jump to a desired tab and to enter the search criteria.
Here, unique numbers in the camera names are very helpful to quickly obtain the right search results.

3.5.2 Live Control Elements

For PTZ or Fix cameras with activated virtual PTZ controller, a virtual joystick is displayed in the control area which can be used to control the camera.
By clicking the blue arrows a camera can be moved into the desired direction. When pulling the joystick the camera continuously moves into the respective direction.

Figure 3-35: Live usage elements

Controlling of focus, zoom and iris is only possible when supported by the camera hardware.

Preset Selection ▾	Retrieving stored presets
⬇	The current camera position is stored. By retrieving the respective preset the camera can be exactly positioned at the same place again. The number of the preset stored can also be used to support positioning in scenarios.
⌂	The "Home" button can be used to set the virtual PTZ controller to its standard position.

3.5.3 Archive Control Elements

If the active video dialog plays back recorded video data, the usage elements for controlling a recording are displayed in the *Video Control pane*.
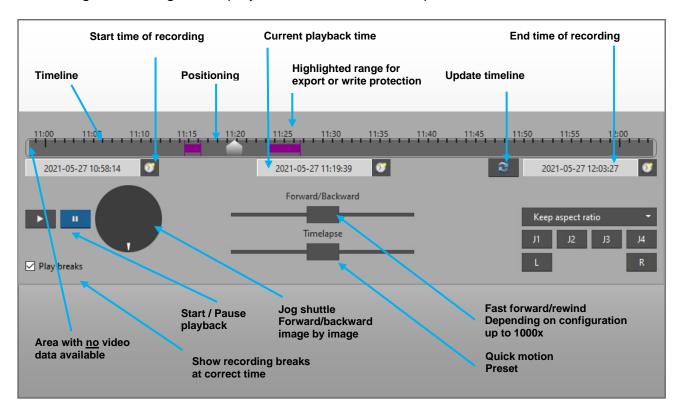

Figure 3-36: Archive/playback usage elements

The main usage elements are described in Figure 3-36: Archive/playback usage elements.

Using the small clock symbols, a date and time adjuster can be displayed for start, end and current time of the timeline to be able to set the respective parameters.
When clicked again the elements will be hidden.

Figure 3-37: Setting the timeline position

The position of the mouse pointer here determines the parameters affected.
If the mouse pointer hovers above the timeline, the slider for the current position in the timeline can be moved forward/backward by turning the mouse wheel.
JogShuttle, forward/rewind and time lapse can be operated the same way.

In standard mode, the time line is not updated automatically. However, a manual update is supported.
An update interval can be set in the configuration file of the workstation (see Administrator's Guide).

Markings for export, video analyses and delete protection are set by using the right mouse button.

3.5.3.1 Export

A data export must be explicitly authorised in the User and Rights Management. The "Export" button is only shown in the toolbar when access rights are granted.

Export button in the toolbar

Using the right mouse button any number of markings can be set for an export in the timeline.
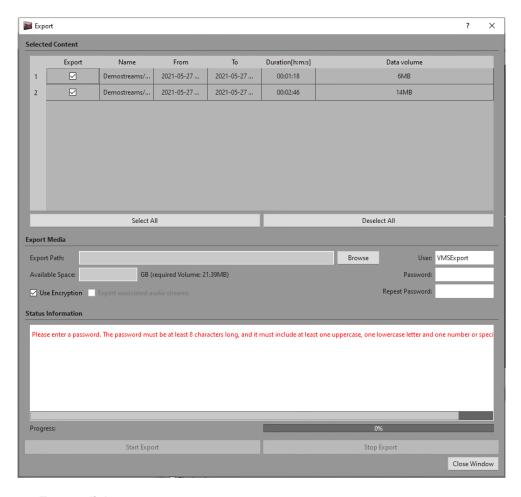Clicking the "Export" button opens a new dialog for configuring the export parameters.

Figure 3-38: Export dialog

Data can be exported to a CD/DVD or internal/external media. A forecast of the required data carrier capacity is calculated and indicated.

Exports should be encrypted, whenever possible.
In case of 32 or 64 bit systems, video players are automatically included in the export.

3.5.3.2 Video Analyses

The integrated video analyses can be used to quickly find changes to an image without viewing the entire image material.
As described in Figure 3-36: Archive/playback usage elements, markings must be set in the timeline to limit the time range to the part that should be analysed.

Figure 3-39: Video Analyses

Before the analyses is started, required parameters like sensitivity or leap method are set and so called "sensor rectangles" for the area to be analysed are defined.

With the CTRL key pressed any number of rectangles can be "drawn" in the image and moved or changed in size afterwards, see Figure 3-40: Video analyses marking and match list.

Red areas in the timeline indicate analyses matches (see Figure 3-40: Video analyses marking and match list). They can then be directly accessed with the slider or selected in the middle of the image by using the dropdown menu.
When selecting via dropdown menu the match of the analyses is always shown in the middle of the timeline. By using forward/rewind or a jog shuttle a further analyses of the chronological sequence is performed.
The process can be stopped any time and restarted to search for further matches.
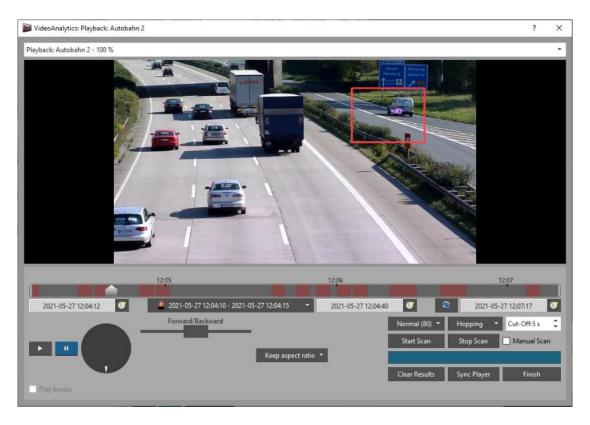
Figure 3-40: Video analyses marking and match list

Sensor rectangles can also be configured via the vimacc Admin Center to act as privacy zones. In these zones, e.g. person or object detection can be activated and the detection confidence be displayed or detected objects be pixelated.

Figure 3-41: Object detection wit displayed confidence value and activated pixelation

For more information on how to configure privacy zones, please refer to the Administrator's Guide.

3.5.3.3 Delete Protection

In general, video material must only be stored for the time agreed with the works council respectively in accordance with the data protection laws. In some cases, it is required to protect video data from being deleted beyond this period in order to enable analyses of a certain operation by authorized personal at a later stage.

A delete protection is used to prevent deletion of video data during automated archive adjustment of the storage system.
Such an operation has to be explicitly authorised in the User and Rights Management. To set or remove a delete protection different rights have to be configured.
To configure a delete protection, the respective time range has to be marked in the timeline using the right mouse button (see Figure 3-36: Archive/playback usage elements).

This marking becomes blue when being clicked (see Figure 3-42: Setting a delete protection). Only afterwards, a delete protection can be applied to the video in the active video dialog or to all videos in the workstation view by using the right mouse button's context menu.
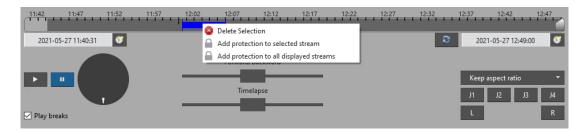

Figure 3-42: Setting a delete protection

The time range of an active delete protection is marked in red in the timeline (see Figure 3-43: Delete protection).
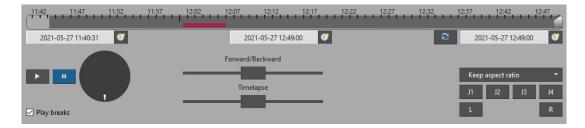

Figure 3-43: Delete protection

A range protected from being deleted during automated archive adjustment will never be deleted automatically. A user action is required in any case.
The delete protection can be removed via the "Delete Protection" tab (see chapter 3.3.10) by selecting the range in the timeline and clicking "Remove delete protection".
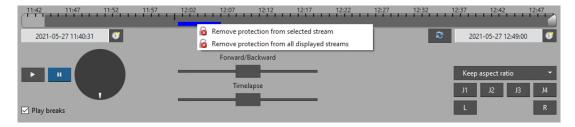
Figure 3-44: Removing a delete protection

Stating a reason is required in any case. The reason can be chosen from a predefined list or manually entered.
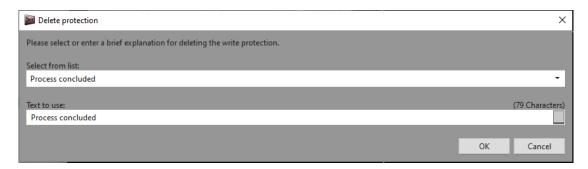

Figure 3-45: Delete protection reason

3.5.4 Control Elements for Sequences

If a sequence has been connected to an active video dialog, the usage elements for controlling a sequence are displayed in the *Video Control pane.*
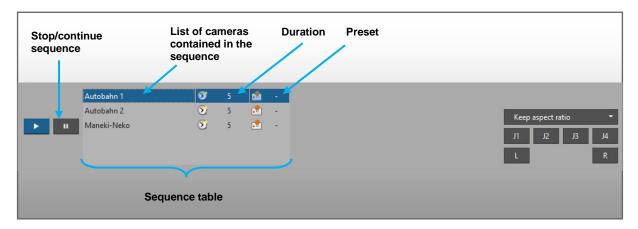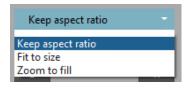

Figure 3-46: Sequence control

The sequence table contains all cameras linked to the sequence in the active video dialog. In addition, the connection time (in sec.) is displayed and indicates how long a camera is shown within a sequence after it has been activated.

If a camera within a sequence supports PTZ functions and a specific PTZ setting has been determined for the camera, the selected PTZ setting is displayed as well.

3.5.5 Other Control Elements

The aspect ratio can be changed for all video dialogs of workstation in the same way.
The following modes are supported: "Image side ratio", "Window side ratio" and "Zoom". For the latter, image contents might get lost when displayed.

Buttons J1–J4, L, and R are Joystick key emulations. They can be configured accordingly in the workstation's configuration file (see Administrator's Guide).

3.5.6 Text Marks

Text marks are used to mark a time range in a video instead of setting up a delete protection. Text marks can be set for live and archive videos.
Processing such a marked operation must occur within the normal deletion period of a video. Associated video data are automatically deleted during automated archive adjustment. However, the text mark in the form of an index entry is kept for research purposes.
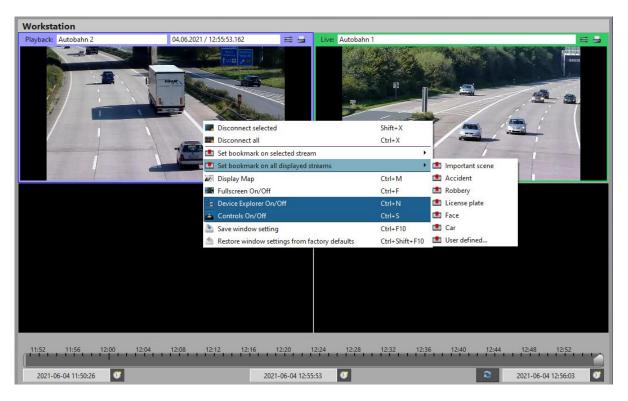

Figure 3-47: Setting a text mark

A text mark can be set on the active video dialog (blue frame) or on all videos visible. To manually enter a text, a predefined list (see Administrator's Guide) as well as a box are provided.
In the timeline text marks are indicated by a blue marking (see Figure 3-48: Set text marks).

The correct time and the corresponding text are shown in a tooltip when the user positions the mouse over a respective text mark.
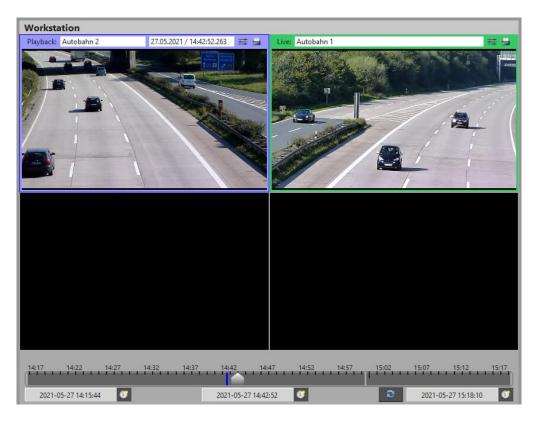
Figure 3-48: Set text marks

Text marks are not automatically deleted. They have to be manually deleted using the "Text Mark" tab (see chapter 3.3.9).

The text marks displayed in the timeline are only updated automatically when the user added a new text mark on the local **vimacc**® **Workstation**.

A text mark added to another **vimacc**® **Workstation** is displayed when it has been reconnected or when the entire timeline has been updated.

3.5.7 Video Wall

vimacc® supports several technologies for building a video wall:

1. vimacc software processes on external PCs/server that can be combined as required
2. EIZO monitors with integrated hardware decoder
3. Video walls from third-party providers like eyevis

Video streams are usually connected via the Video Wall control in the top left of the workstation. Adding further providers has no effect on how the control works. A combination of several providers in a project is supported. The Video Wall control view can be adjusted by using configuration files (see Administrator's Guide). For adjustments and changes administrator rights are required.

Video streams are connected from a camera tree or map via drag & drop (see chapter 3.5.1). An auto layouter ensures that always the maximum number of videos possible is connected to the target monitor. During this, videos that have already been connected might be deleted. When connecting with the CTRL-key pressed, the selected videos are added to other videos that have already been activated. The auto layouter extends the grid on the target monitor accordingly.
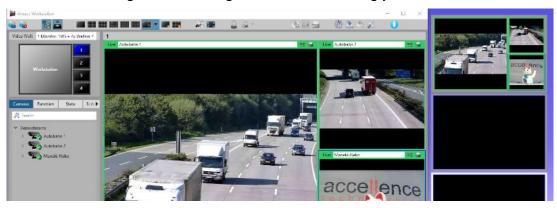

Figure 3-49: Video wall sync mode

Figure 3-50: Video wall sync mode disconnected

In sync mode (video wall monitor selected in Video wall control and blue), a copy of the monitor removed is displayed on the user's workspace. The view can be directly edited. If the (blue) element in the Video Wall control is clicked again, the connection terminates and the user is returned to his own workspace view.

3.5.8 Configuration Menu

The "Configuration" menu of the workstation is available when the function has been released to the user via the User and Rights Management.
Configured sequences and scenarios are stored in the central configuration database when the dialog is closed to ensure that they are available for all workspaces having the respective rights.

3.5.8.1 Sequences

A sequence in the context of **vimacc®** is a method to automatically link cameras in a predefined order to a video wall monitor or **vimacc®Workstation**.
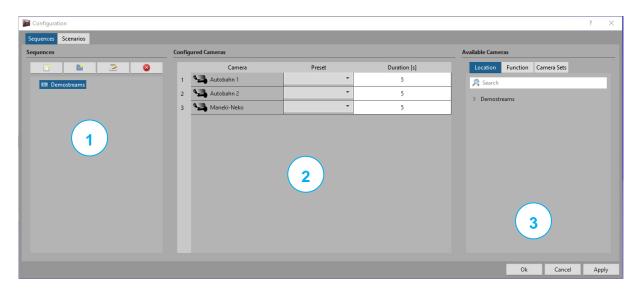

Figure 3-51: Configuring sequences

The "Configuration" dialog for sequences is divided into three segments:

    1:    Tree view of sequences already available

    2:    Sequence configuration pane

    3:    Available cameras in two differently sorted trees

1: Tree view sequences

Using the buttons or the right mouse button's context menu the following can be done:
- creating new sequences
- creating new folders for sequences
- renaming sequences
- deleting sequences

2: Sequence configuration pane

- This area, consisting of a table, represents the configuration of a selected sequence. The table shows the cameras as well as the order and durations in which they should be displayed in the sequence.

- By right clicking within the table, a context menu appears which can be used to remove cameras from the configuration or shift them to another line of the table. The context menu can also be used to delete the entire table.
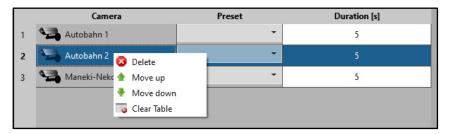

Figure 3-52: Context menu in configuration pane

3: Available cameras

- Here, all cameras available are displayed in an alphabetically sorted camera list and in the function tree.
- The "Filter" field can be used for pre-selection.
- A sequence can only contain live cameras.

Cameras from the trees can be added to the currently selected sequence with a double click.

By clicking "Apply" the current status is stored to the central database without exiting the dialog. The sequence is then available for other users. By clicking "OK" the operation is stored and the dialog closes.

3.5.8.2 Scenarios

A scenario in the context of **vimacc®** is a configured camera or sequence connection to the monitors on a video wall or to the **vimacc® Workstation.** It enables the user to simultaneously link several cameras or sequences to different monitors.
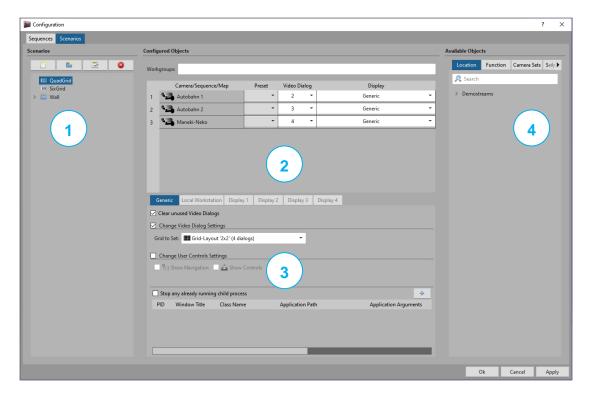
Figure 3-53: Configuring scenarios

The "Scenarios" tab is divided into four segments:

    1:    Tree view of scenarios

    2:    Configuration pane for scenarios

    3:    Action pane for scenarios

    4:    Available cameras, sequences and maps

1: Tree view of scenarios

Here, all configured scenarios are displayed. Scenarios can be grouped into folders.

Using the buttons above the tree view of scenarios or the right mouse button's context menu, scenarios can be added, renamed, and removed and a new folder can be generated.

2: Configuration pane for scenarios

This area represents the configuration of a selected scenario. The table shows which cameras or sequences are displayed on which target monitor and in which video dialog.

Each camera and sequence has to be assigned to a video dialog and target monitor. In this context, a target monitor may be an external monitor on a video wall or a **vimacc® Workstation** in the system.

The "Generic" option does not correspond to a real monitor, instead it functions as placeholder for any monitor. The user can execute a scenario on any monitor at runtime. When connecting, always the active monitor is used. This is either the **vimacc® Workstation** or a monitor of a video wall in sync mode.

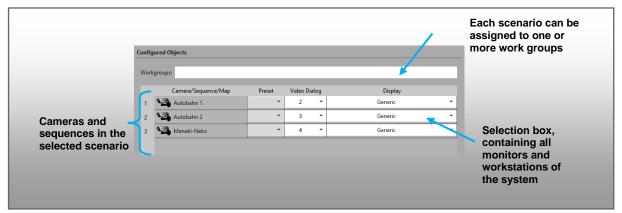Each scenario can be added to one or more work groups.

Figure 3-54: Configuration pane for scenarios

When right-clicking within the table of the configured objects a context menu opens, which enables the operator to reorder the cameras/sequences, to delete a camera/sequence from the table or to clear the whole table.

3: Action pane for scenarios

Here, the display mode of any target monitor can be defined and the usage elements to be displayed on another **vimacc**® **Workstation** when the scenario is connected can be set.
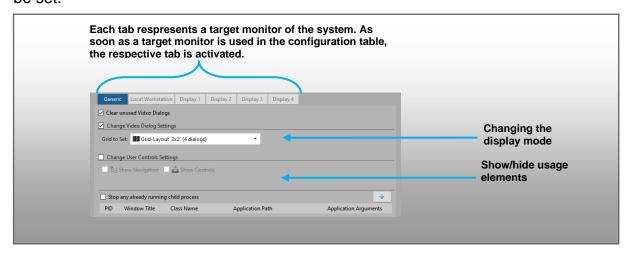

Figure 3-55: Action pane for scenarios

4: Available cameras and sequences

- Here, all available cameras, sequences and maps are displayed.
- The "Filter" field can be used for pre-selection.

Cameras can be added to the currently selected scenario via double click.

3.5.8.3 Camera Sets

A camera set in the context of **vimacc®** is a combination of multiple video streams from different cameras into a single video image. When connecting the camera set from the "Camera Set" tab all combined streams will be connected simultaneously. Configured privacy zones of the respective streams are transferred.

To configure a camera set the respective function needs to be made available to the user via the User and Rights Management.

Every single stream of a camera set needs to be decoded before being displayed. The hardware needs to cope with these performance requirements.
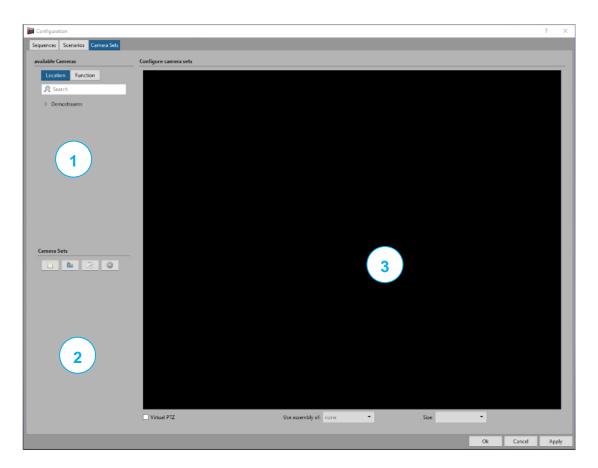

Figure 3-56: Configuring camera sets

The "Camera Sets" tab is divided in three segments:

1: Available Cameras

2: Camera Sets

3: Configure camera sets

1: Available Cameras

This segment lists all cameras available to the user. They can be ordered either by location or function.
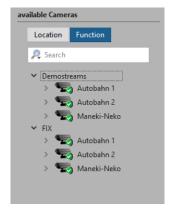

Figure 3-57: Available cameras pane for camera sets

2: Camera Sets

In this segment new camera sets and folders to order camera sets can be created, renamed or deleted.

    Create a new camera set

    Create a new camera set folder

    Rename camera set or camera set folder

    Delete camera set or camera set folder

3: Configure camera sets

Here, the created camera sets can be configured for the use in the workstation. Cameras can be added to a camera set by selecting a set and dragging and dropping the icon of the respective camera from the Available Cameras pane to the Configure camera sets pane.
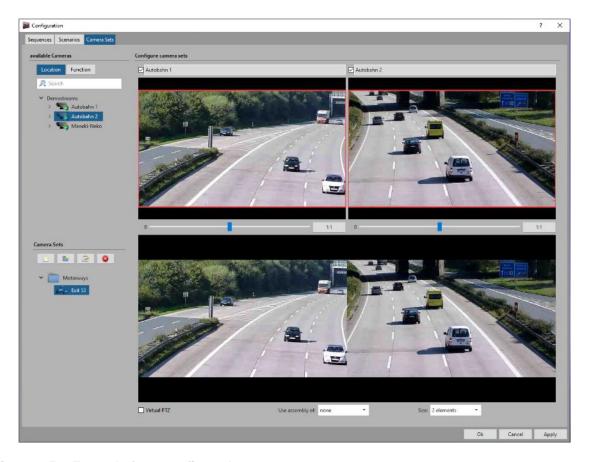
Figure 3-58: Example for a configured camera set

The number of cameras in the set can be adjusted via the 'Size' dropdown-menu in the lower right corner of the segment. Increasing the value will stitch the streams of more cameras into one.
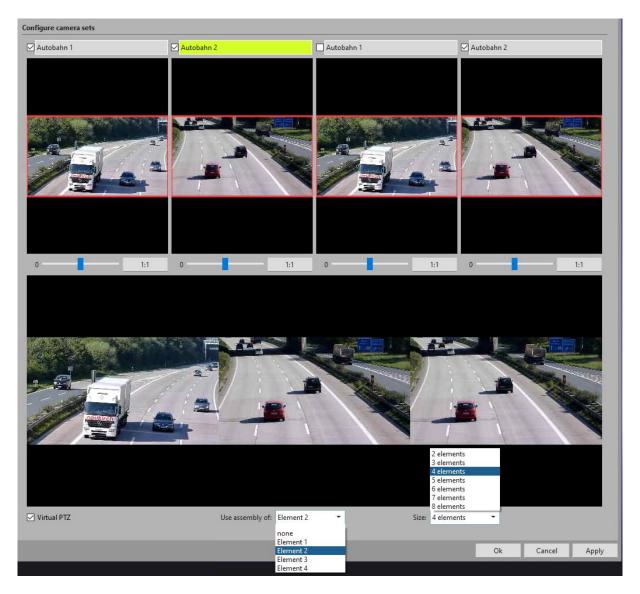
Figure 3-59: Camera set with four input streams

The 'Use assembly of' dropdown-menu in the lower middle of the pane can be used to select for which camera the logic assemblies should be shown in this set. Logic assemblies can consist of e.g. buttons or LEDs, connected to devices monitored by the camera, like the controls to open/close a gate. The name of the selected camera is highlighted by a green background.

Checking the 'Virtual PTZ' checkbox in the lower left corner of the pane will activate the PTZ functions for the selected Camera set.

Unchecking any of the checkboxes next to the name of an input stream will exclude this input stream from the final camera set.

Examples for all these features can be seen in Figure 3-59.

Figure 3-60: Removing a camera

To remove a camera from a camera set, use the 'Clear element' entry in the context menu opening, when clicking the stream with the right mouse button.

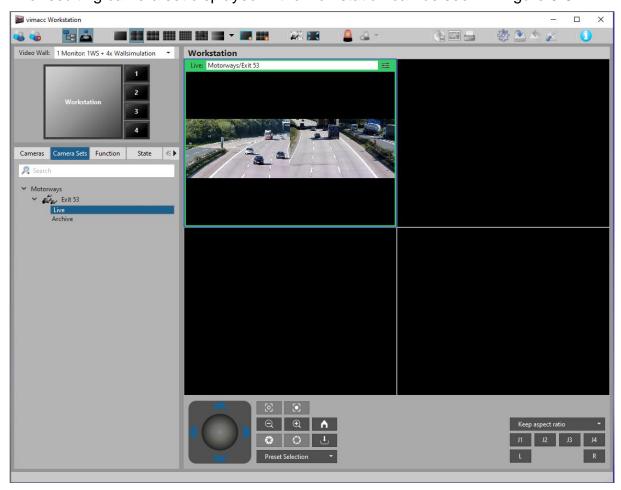The resulting camera set displayed in the workstation can be seen in Figure 3-61.

Figure 3-61: Workstation with PTZ-enabled, 2-element Camera Set

3.6 Maps

Maps in **vimacc®** are managed as stacks. Navigation between maps in a stack is automatically supported. No further configuration steps are required. Additional options for navigating in maps via links/references can be manually configured.

By using the Map editor, elements like cameras, scenarios, monitors, displays, control elements for IO contacts as well as links/references can be positioned on the maps (see Administrator's Guide).

There are three different methods for working with maps:
- "Map" tab (see chapter 3.3.7)
- Activating maps in the toolbar (see chapter 3.1)
- Connecting a map to a video quadrant

Functionality is identical for all three methods. Only the position of the control elements is adjusted to the view.
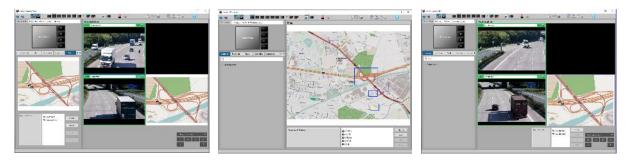

Figure 3-62: Position of control elements on map

To navigate within maps either the control elements displayed or the context menu of the right mouse button can be used.

Figure 3-63: Context menu of the map view

Start   Go to initial map

Back   Back to previous map
Up   Move one step up (only available, when several maps are organised
                      as stack).
Down   Move one step down (only available when several maps are
                      organised as stack).

3.6.1 Connecting Cameras from Maps

Connecting cameras from maps is similar to connecting cameras from a camera tree:
- Selecting a video dialog and connecting a camera via double click
- Connecting via drag & drop by dragging the camera to the respective video dialog

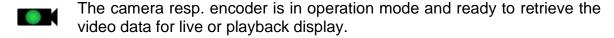Dragging cameras to a Video Wall control monitor is also supported.

Within a map or map, cameras or scenarios can also be directly linked/dragged to the monitors of a video wall. The detour through the camera tree/Video Wall control can be omitted.

Figure 3-64: Direct connection of cameras to monitors

3.6.2 Symbols on Maps

The camera resp. encoder is in operation mode and ready to retrieve the video data for live or playback display.

The system detected a camera error. Live video images cannot be retrieved. The encoder is either not available or the camera signal is missing. Recorded video data are still accessible.

The camera is temporarily out of operation. Live video images cannot be retrieved. Recorded video data are still accessible.

Sequence symbol, double click to connect the sequence to the active video dialog of the *Video Output pane*.

Scenario symbol, double click to active this scenario.

Symbol for video wall monitor. By dragging and dropping a camera or scenario to a monitor symbol (drop zone) it can be directly connected to this monitor.

All symbols can be customized in the Map editor.

3.6.3 Symbols of the Map Control

Camera – By double clicking this list entry, all video data of the corresponding camera in the active video dialog are displayed in the *Video Output pane*.

Reference/link to another map – By double clicking this list entry, the respective map appears.

Scenario – Double clicking this list entry activates the scenario.

Sequence: By double clicking this list entry, the sequence in the active video dialog of the *Video Output pane* is connected.

3.7 Alarm Handling

vimacc® reacts to spontaneous events. In such cases, it assigns configured actions and executes them automatically.
Examples for such events are: a motion detected in a camera image, a closed or opened contact at an I/O module or an alarm transferred from a higher level management system.

Two different modes of alarm processing are integrated:

The *simple* mode supports two buttons for alarm processing. If an event occurs, alarm scenarios are automatically defined and can be displayed and processed on the "Scenario" tab.

       Manual alarm triggering by user

       Terminating an alarm

When in *advanced* mode, the **vimacc**® **Workstation** can represent the events signalized by the vimacc system in an alarm queue or alarm table to provide the user with an overview of the current status. Two additional buttons are available:

       Returns the active alarm to the alarm queue

       Toggle Show all alarms / Show new alarms only

In this mode, video dialog 1 (top left) is defined as Alarm dialog. Here, up to nine live images (preview) can be displayed in reduced size.

        The alarm queue of a **vimacc**® **Workstation** is deactivated by default and has to be activated via the User and Rights Management, when required (see Administrator's Guide).

During alarm processing, the following states are possible: "New", "Accepted", and "Completed". Returned alarms automatically get the "New" status. The operations can be researched in the event log at a later stage.

On **vimacc**® documentation level (Reporting), all alarm states as well as all usage operations are logged in a report database during processing.

3.7.1 Simple Alarm Mode

Having the required user right, the user of a **vimacc® Workstation** can manually trigger an alarm by using the "Alarm" button in the toolbar.
As a result, an alarm scenario is generated for all connected videos and the alarm recording starts. The video arrangement is stored for later research purposes.
The generated alarm is entered in the list of active alarms and the "Alarm" button as well as the "Scenarios" tab are visualized flashing to get the attention of the user.

The name of the created scenario consists of the trigger time and the name of the workstation that triggered the alarm (see Figure 3-80).
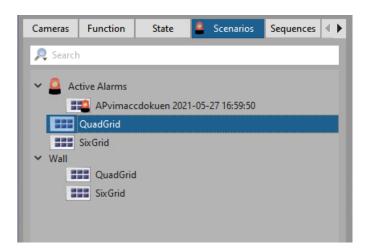

Figure 3-65: Alarm scenario display

Since the user triggered the alarm itself the alarm status immediately changes to "Accepted".

Processing of an alarm must always be technically completed by using the "Terminate alarm" button of the toolbar. If an active alarm is not correctly completed, it remains in the system and will still be signalized.
The reason for terminating can be selected from a predefined list or manually be entered.

3.7.2 Editing an Alarm from the List of Active Alarms

Each **vimacc® Workstation** within the **vimacc®** system configured to handle alarms can process active alarms of the entire system.

Alarms currently processed are displayed in the "Navigation" pane on the "Scenarios" tab below the "Active alarms" entry (see Figure 3-65: Alarm scenario display).
By double clicking an entry in the list the user can process this alarm as well, i.e. the associated alarm scenario is linked and the user is registered as processor of this alarm as well.

After such an alarm has been accepted the button for terminating an alarm is activated in the application's toolbar and must be used by the user to terminate the alarm later (see chapter 3.7.3).

3.7.3 Terminating an Accepted Alarm

An alarm generated and accepted within the **vimacc®** system is completed only if it has been technically terminated at a **vimacc® Workstation**.
To terminate an alarm currently processed at a **vimacc® Workstation**, the "*Terminate alarm*" button in the toolbar is used (see Figure 3-66).

Always the alarm currently processed is terminated. The tooltip of the "*Terminate alarm*" button displays detailed information about the current alarm.

Figure 3-66: Button tooltip for terminating an alarm

When the "*Terminate alarm*" button is clicked, a menu appears where the user can set a short description of the alarm and terminate it. The alarm description can be selected from several predefined texts (Figure 3-67) or manually be entered via the menu entry "*User defined...*" (Figure 3-68).
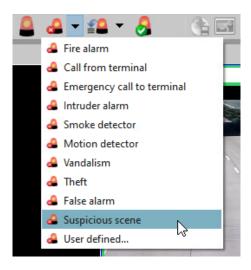

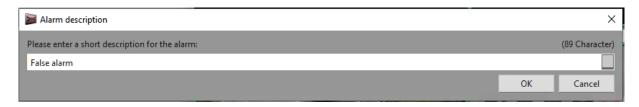**Figure 3-67: Context menu for selecting an alarm description**

Figure 3-68: Manually entering an alarm description on exit

After the alarm reason has been selected the associated alarm is deleted and removed from the list of active alarms. In addition, the "*Terminate alarm*" button in the toolbar is deactivated.

The selected alarm description can be used as search criterion when previous alarms are processed at a later stage.

Several alarms can be linked and edited successively at a **vimacc**® **Workstation**. This can be done by linking different alarms from the list of active alarms (see chapter 3.7.2).
When an alarm is linked, the alarm currently processed is not terminated and remains in the "In process" status as well as on the list of active alarms.

Alarms always have to be explicitly terminated via the "*Terminate alarm*" button. The "*Terminate alarm*" button always applies to the last accepted alarm.

Only a correctly terminated alarm will be removed from the list of active alarms.

3.7.4 Extended Alarm Mode – Queue

The display of the **vimacc® Workstation** can be configured in a way that the first video dialog of the different grid presentations in the display area is reserved for displaying and processing alarms (see Administrator's Guide).
In the following, the video dialog is also called "Alarm" video dialog.

The "Alarm" video dialog cannot be used for regular video connection. It is displayed with a white frame.

3.7.4.1 Alarm Display

The "Alarm" video dialog displays the previews of the alarm images in the form of single video connections when the alarm queue is used. Here, always the first camera of the alarm scenario is displayed as live image (preview).

The maximum number of alarm previews in the "Alarm" video dialog is nine (9). In case of several alarms, the "Alarm" video dialog changes, depending on the number of alarms, automatically to a 2x2 or 3x3 display.
The order of the video connections is as follows: from top left (first alarm received) to bottom right (last alarm received).

Figure 3-69: Display in case of different numbers of queued alarms

Overhanging alarms are not visualized by further video connections, instead, the number of overhanging alarms is shown in the ninth alarm image of the "Alarm" video dialog (see Figure 3-70).

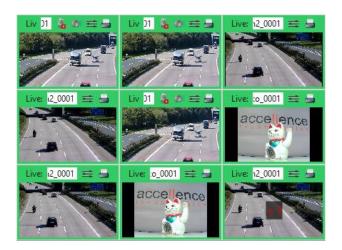When alarms are accepted, overhanging alarms move up (alarm stack function).

Figure 3-70: Display of 10 alarms in the alarm queue

The order of the alarms in the alarm queue depends on the time an alarm was triggered. The alarm priority is not taken into account when alarms are queued.

When alarms are received, the video output does not automatically changes its display mode. If, e.g., full screen is activated, the "Alarm" video dialog is not displayed automatically.
If the "Alarm" video dialog is not visible when alarms are received, the user is visually notified of a new alarm by a flashing symbol in the presentation buttons of the toolbar (see Figure 3-71).

Figure 3-71: Toolbar in case of an alarm

The user can display the "Alarm" video dialog by clicking one of the display mode buttons or by double clicking a video image when fullscreen is used. In such a case, the system automatically changes to the previous display mode.

If the "Alarm" video dialog is visible when alarms are received, the user is notified by a flashing frame.

3.7.4.2 Accepting Queued Alarms

One of the nine alarms displayed in the alarm queue can be directly accepted by double clicking the respective live image.
Alarms do not have to be processed in their order of occurrence.

After the alarm has been accepted possible overhanging alarms move up so that a maximum of nine live images (preview) are shown in the first video dialog again.

When an alarm is accepted, the cameras of the associated alarm scenario are connected to the other video dialogs. Whether the other video dialogs are deleted in case of an alarm activation can be defined in the alarm scenario.

Figure 3-72: Example of an alarm acceptance

> All alarms must be technically terminated as described in chapter 3.7.3!

3.7.4.3 Returning an Alarm to the Alarm Queue

An alarm that has been accepted at a **vimacc**® **Workstation** can be returned to the alarm queue.
A returned alarm gets the "New" status again, i.e., it is queued and signalized to other workplaces as waiting alarm once more.
To return an alarm to the alarm queue the "*Return alarm to queue*" button of the application's toolbar is selected.

Always the alarm currently processed is returned. The tooltip of the button displays detailed information about the current alarm.

Figure 3-73: Tooltip of the button for returning an alarm to the alarm queue

After selecting "*Return alarm to queue*" a menu appears, where the user can make a short note about the reason for returning the alarm. The description can be selected from several predefined texts (Figure 3-74: Context menu for returning an alarm to the alarm queue) or manually be entered via the menu entry "*User defined...*" (Figure 3-75: Manual entry of the alarm reason when it is returned).

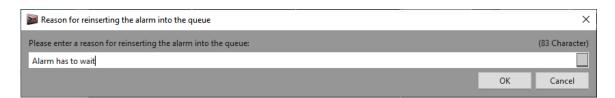**Figure 3-74: Context menu for returning an alarm to the alarm queue**

Figure 3-75: Manual entry of the alarm reason when it is returned

The selected description is logged with the alarm related data and can be used for an easier differentiation of the alarms as well as a search criterion when previous alarms are processed at a later stage.

3.7.5 Extended Alarm Mode – Alarm Table

The **vimacc® Workstation** can be configured in a way that the alarm queue is displayed in a table below the navigation pane while alarms are processed (see Administrator's Guide).

In this case, the first video dialog of the different grid presentations is also locked for regular video connections. However, it does no longer display the alarm queue in the form of single video connections. Instead, it is used to display the video connection of the first alarm in the alarm table.

3.7.5.1 Alarm Display

One of the advantages of the alarm table is that the date of the alarm, the trigger, the type and the priority are shown. In addition, when there are more than nine alarms queued, the user can also accept an alarm at position 10 or higher.

Figure 3-76: Displaying the alarm queue in the alarm table

Furthermore, by clicking the column header field the table can be resorted according to the respective element, i.e. another processing order can be determined.
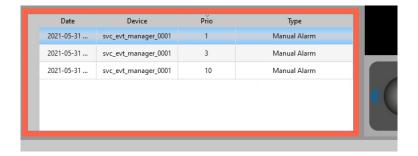
Figure 3-77: Resorted alarm table (here, according to priority)

The small arrow symbol above the column header indicates the criterion according to which the table is sorted as well as the order.

In the alarm table, the alarm for which the video preview is shown in the "Alarm" video dialog is highlighted in colour. Usually, this is the first alarm in the table (see Figure 3-77). Thus, the "Alarm" video dialog switches to another preview if the alarm table sorting is changed as described.

It is also possible to directly display any alarm from the alarm table as life image in the "Alarm" video dialog. To do so, select the respective table entry and right click it. By selecting the "Show preview" entry in the context menu that appears, the associated preview can be activated.
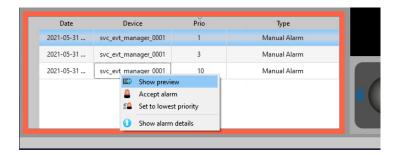

Figure 3-78: Newly sorted alarm table

The following operations can be performed using the context menu of an alarm entry:

Show preview – Connects the live image of the associated alarm to the first video dialog.

Accept alarm – Accepts the alarm for processing at this workstation. The alarm is removed from the queue und the respective video connections are linked.

Decrease alarm priority – Decreases the alarm priority so that the alarm is moved to the end of the alarm queue. According to the current sorting, the new first entry in the table will be automatically displayed as preview in the first video dialog.

> ℹ️ *Show alarm details* – Opens the *Alarm details dialog* with information about the alarm (see Figure 3-79)

After the "Show alarm details" entry has been selected from the context menu of an alarm, the following dialog appears:
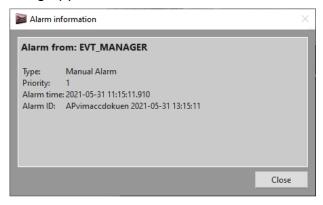

Figure 3-79: Display of alarm details via alarm table

3.7.5.2 Accepting via Alarm Table

An alarm from the alarm table can be accepted with a double click or by using the context menu (see Figure 3-78: Newly sorted alarm table).
After the alarm has been accepted the respective line is deleted in the alarm table

After acceptance, the alarm lamp in the toolbar starts to blink and the scenario associated with the alarm is connected. When an alarm is accepted, the cameras of the associated alarm scenario are connected to the other video dialogs. Whether the other video dialogs are deleted in case of an alarm activation can be defined in the alarm scenario.

If more than one **vimacc® Workstation** is active within the **vimacc®** system and if an alarm displays at several workstations, it can be accepted at all workstations. As soon as an alarm has been accepted at the **vimacc® Workstation**, it will automatically be removed from the alarm queue of the other workstations.

Alarms currently processed are displayed as alarm scenarios in the **vimacc® Workstation** in the navigation pane on the "Scenarios" tab. An "Active alarms" entry displays next to the configured scenarios as soon as at least one alarm is handled. To clearly indicate that there are active alarms, a blinking alarm lamp is additionally displayed on the "Scenarios" tab (see Figure 3-80).
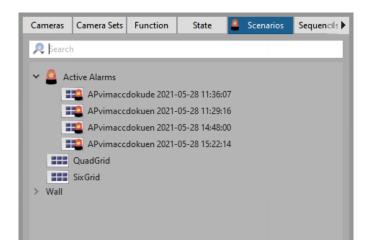
Figure 3-80: Display of an active alarm in the "Navigation" pane

As soon as a user accepts an alarm at a **vimacc**® **Workstation**, it changes to the "Accepted" status and is automatically be removed from the system's alarm queue.
In addition, the button for terminating the alarm is activated in the toolbar.

Figure 3-81: Flashing alarm lamp in the toolbar

All alarms must be technically terminated as described in chapter 3.7.3!

4 vimacc Display

The **vimacc® Display process** is the key component for designing video walls. The program mainly bases on the **vimacc® Workstation**. However, functions have been reduced to a minimum, to ensure for maximum performance when playing back videos.

The application window of the **vimacc® Display** is divided into 2 panes:

    1:    *Toolbar*

    4:    The *Video Output pane* consists of up to 32 video dialogs.

        VD 1: *Video dialog 1 (top left)* … VD 6: *Video dialog 6 (bottom right)*

Figure 4-1: vimacc Display with usage elements

The usage elements available support the following functions:

Fullscreen – Toggles between usage elements ON / OFF **CTRL+F**

Save settings – Saves the current workstation parameters (size, position, monitor number, etc.).

Reset settings – Resets the parameters to the settings from the configuration file (see Administrator's Guide).

System information – Opens the *Info dialog* with the current version numbers as well as OpenSource and licence information.

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The configuration options are also available via the context menu of the right mouse button.

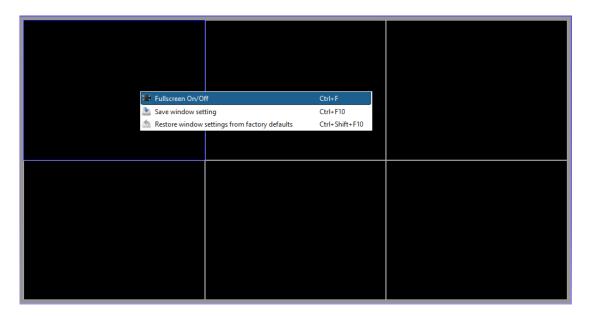|		
Fullscreen On/Off	Ctrl+F
Save window setting	Ctrl+F10
Restore window settings from factory defaults	Ctrl+Shift+F10

Figure 4-2: vimacc Display context menu

Due to the basic settings of the **vimacc**® **Display** the Display processes can be started without any usage elements. Both fullscreen display as well as windowed display are supported (see Administrator's Guide).
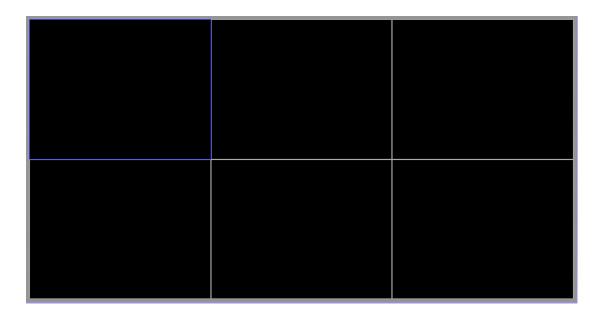

Figure 4-3: vimacc Display without usage elements

5 vimacc Systray

The **vimacc**® **Systray** tool provides a quick overview of the video management system's overall status. It is installed to the Systray area of the operating systems. The view has to be configured according to the operating system used.

After the system has booted, the tool should be directly started via the auto start function.

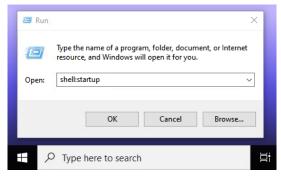Using "Windows+R" and "shell:startup" the auto start area of most operating systems can be called.

Figure 5-1: vimacc system in shell:startup

Different system states are signalized. When clicking the symbol, detailed information is shown.

Figure 5-2: vimacc Systray messages

6 Table of Figures

accel**lence**
t e c h n o l o g i e s
                                                                                        Page 70

7 Support / Hotline

More information: www.vimacc.de

Do you have any questions about **vimacc®**?

- Send an email to **support@accellence.de**
or
- Call our hotline: **+49 (0)511 277 2490**

Our staff is happy to help you from 09:00 AM to 5:00 PM CET/CEST on business days.

8 Index

A

Alarm
  Alarm description 56, 60
  Alarm details 64
  Show alarm preview 63
Alarm queue 54
  Display 58
Alarms 20
  Alarm stack 58
  Alarm table 62

C

Camera tree view 15
Configuration
  Configuring a Camera Set 46
  Configuring a Scenario 43
  Configuring a Sequence 42
Crypto dongle 25

D

drop zone 53

F

Fix camera 15

M

Main application window 9, 66
Map
  Symbols 53
Maps 7, 19, 52

N

Navigation pane 14
  Alarms 20
  Camera symbols 15

  Cameras 15
  Scenarios 17
  Sequences 18
  Text Marks 21

P

Playback
  Playback Control 32
PTZ camera 15

S

Scenarios 17
Sequence
  Sequence control 38
Sequences 18
Support 71

T

Text Marks 21
Toolbar 10

V

Video Control pane
  Playback control 32
Video Control pange
  Sequence control 38
Video dialog
  Blue 25
  Green 23
  Purple 23
Video Output pane 23
Video pane
  Move 27
  Zoom 27
Video Wall control Monitor colours: 13

accellence
t e c h n o l o g i e s