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CUBEVISION MODULE
documentation

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1   INTRODUCTION

Thank you for having purchased the new **CUBEVISION**MODULE and thank you for your trust. In order to be able to use the full range of functions and to ensure quick and easy handling, we recommend that you read these operating instructions carefully.

Figure 1: CUBEVISIONMODULE

Product name: **CUBEVISION**MODULE
Intended use: Visualisation
Design: Modular device (Reiheneinbaugerät, REG)
Interfaces: LAN / KNX or EnOcean
Item number: 10560 (KNX) / 13560 (EnOcean)

1.1 RANGE OF FUNCTIONS

The **CUBEVISION**MODULE is a visualisation gateway between KNX and/or EnOcean (currently being planned) and the Ethernet. It includes the established CUBEVISION visualisation. CUBEVISION is a browser-based visualisation based on HTML 5 technology, and free of licence costs: a visualisation which can be operated intuitively and set and adjusted easily.

Functional overview:

- Integrated multi-user browser visualisation based on HTML 5, free of licence costs
- Integrated Java-based visualisation editor, free of licence costs
- 13 pre-formulated visualisation elements with different function and feature modifications
- Automatic creation of the visualisation based on building structure and element assignment
- File your own background images (jpg, png, gif)
- Favourites function optionally arranges the elements according to frequency
- Quick navigation to quickly navigate through the rooms
- Special interface for operating RGB and RGBW luminaires with scenes and favourite colours
- Special interface for automatic and manual multimedia control of Squeezebox, **AUDIO**MODULE and SONOS radio stations
- Special interface for displaying diagrams, with comparison and freeze function, bargraphs and data types from 1 bit to 4 bytes
- Special interface for displaying and retrieving weather data from the Internet with automatic configuration by simply entering the city or postcode
- Special interface for displaying weather data from KNX with temperature, wind speed, wind direction, brightness, atmospheric pressure, humidity, rainfall and any desired value
- Special interface for the display of IP camera pictures in MJPEG and JPEG incl. PTZ control and approach position
- Switch / dimmer element with relative / absolute dimming, value display and different icons
- Button element with toggle function, button, constant value, value display and different icons
- Temperature / RTR element with heating / cooling, extension, operating mode switching
- Blind element with roller shutters, blinds, Venetian blinds and "Touch & Slide" operation
- Window contact 1 bit, 1 byte and breakage of glass
- Value indicator, input with restriction, factor and offset
- Group / scene switch with 33 different icons and data type1 bit and 1 byte
- Several visualisation projects possible
- User administration with access restrictions up to individual pages possible
- Optional and freely selectable categorisation of all elements for separate central overview
- Address status table with all 32,766 KNX as well as 32,768 virtual addresses for deriving the object states (no bus initialisation necessary).
- Circular buffer for 20,000 telegrams, exportable as CSV file
- Assignment of SONOS radio stations via UPnP
- Data backup and recovery
- Integrated update mechanism for software updates free of charge
- KNXnet/IP server with integrated KNXnet/IP routing and tunneling
- Time zone setting
- Synchronisation with NTP time server
- User administration for the access to the configuration
- Address transfer from ETS (*.esf file)
- No data point restriction

1.2 TECHNICAL DATA

Item no.: 10560

- Operating voltage: 12–32 V DC
- Typical power consumption 300 mA at 12 V DC
- Power consumption: <= 5 W
- Connection: Power supply via screw-type terminal
- Resistant to climate: EN 50090-2-2
- Ambient temperature: –5 to + 35 °C
- Storage temperature: –10 to + 60 °C
- Rel. humidity (non-condensing): 5 % to 80 %

Mechanical data:
- Assembly: Modular device (REG) housing 4 TE
- Dimensions (W x H x D) in mm: 70 x 90 x 63
- Housing: Plastic
- Degree of protection: IP20 (according to EN 60529)

Interfaces:
- Ethernet via RJ-45 female connector
- KNX®/TP connection
- EnOcean® currently being prepared

Specific features:
- Automatic creation of visualisations

Software requirements:
- Operating system: Platform-independent
- Communication: Network interface
- Browser: Current standard browsers
- CUBEVISION Editor: Current Java VM

1.3 SCOPE OF DELIVERY

The scope of delivery of **CUBEVISION**MODULE includes the following content:

- 1x CD with the corresponding documentation and auxiliary programs
- 1x **CUBEVISION**MODULE

A power supply unit for the device is NOT included in the scope of delivery!

In addition to the connection for the power supply (**12-32 V DC**), the **CUBEVISION**MODULE has the following interfaces:

- 1x RJ-45: Ethernet 100Mbit/s Full Duplex
- KNX® / TP connection or SMA female connector for EnOcean (currently being planned)

1.4 UPDATES

We reserve the right to offer firmware updates free of charge for the **CUBEVISION**MODULE. In our newsletter, you will be informed of any possible firmware updates. The update files are made available in the download section on our homepage.

1.5 IMPORTANT INFORMATION ON THE OPERATING INSTRUCTIONS

When using this description, it must be noted that all information and illustrations / figures are non-binding. In the interests of our customers, the software described in these operating instructions is being constantly developed further. Therefore, the information provided in these operating instructions may no longer be accurate under certain circumstances. Information on current **CUBEVISION**MODULE firmware and also on this description ("**CUBEVISION**MODULE documentation") can be found at www.bab-tec.de.

2 ASSEMBLY

CUBEVISIONMODULE features	
(1)	KNX connection
(2)	Power supply via screw plug-in terminal 12-36 V DC
(3)	USB connection without function
(4)	RJ-45 female connector for Ethernet LAN

Figure 2: CUBEVISIONMODULE
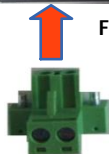
Figure 3: Screw plug-in terminal

The device shown in these operating instructions is the **CUBEVISION**MODULE (item no. 10560).
Modular device (REG) housing 4TE.
Dimensions (width x height x depth): 70 x 90 x 63 mm.

In order to assemble the device, please proceed as described below:

Note: The operating voltage of the CUBEVISION MODULE is 12-32 V DC.

When establishing the power supply, please make sure that sufficient power is available (see chapter "Technical data").

- In order to ensure that the power supply and KNX can easily be connected, the screw plug-in terminals are removed.
- Now connect the power supply cables and the KNX line to the respective screw plug-in terminals.
  Note: In doing so, please make sure that the polarity corresponds to that shown on the front of the housing.
- Insert the screw plug-in terminals into the respective connections and correct the polarity once again.
- Snap the device onto the mounting rail according to DIN EN 60715 and connect the network cable.
- Switch on the supply voltage and check the LED status (see chapter below).

2.1   LED STATUS

The **CUBEVISION**MODULE has two DUO LEDs ("Power/Boot" and "Status"). Each DUO LED has a green and a red LED. The top LED is the "Power/Boot" LED, the bottom LED is the "Status" LED.

POWER / BOOT LED

LED display	Status
OFF	The device is not ready for operation. No operating voltage is supplied.
GREEN	The device is ready for operation.
FLASHING ORANGE	The device is booting.

STATUS LED

LED display	Status
OFF	The device is booting
FLASHING GREEN	The device has been started; the LED simulates a "heartbeat". The flashing interval increases depending on the device utilisation.
FLASHING RED	Communication takes place via KNX.

Explanation:
The green "Power/Boot" LED lights up as soon as the **CUBEVISION**MODULE is supplied with power. Two to three seconds after the power supply has been switched on, this LED also starts to flash red (flashing orange) until the booting process has been completed. Then the LED is permanently illuminated green, while the "Status" LED flashes green (simulates a "heartbeat"). The flashing frequency increases depending on the device utilisation.

It takes approx. **three (3) minutes** to start the **CUBEVISION**MODULE.

2.2   INITIAL OPERATION

If the **CUBEVISION**MODULE has been mounted and started as described in chapter "Assembly", commissioning can now be continued as specified below.

Factory setting on delivery:

IP Address	192.168.1.229
Subnet Mask	255.255.255.0
Username	admin
Password	admin
Device Name	CVM

Note: The password must be changed immediately when logging in for the first time. If the password is lost, the device cannot be reset!

2.2.1   SYSTEM REQUIREMENTS

Operating system:	Platform-independent
For configuration:	Current browser and current Java machine (for CUBEVISION Editor)
CUBEVISION:	Software: Current Webkit / Gecko browser (Chrome, Safari, Firefox)
	Hardware: High-performance hardware with 3D hardware acceleration

Note: In order to determine whether CUBEVISION can be used on the required system, please check the 3D acceleration as described below:

- Install Google Chrome (if this has not already been done).
- Enter "chrome://gpu" in the address line.
- Check if "3D CSS" and "CSS Animation" are set to "Hardware accelerated" or "Accelerated" (see figure below).
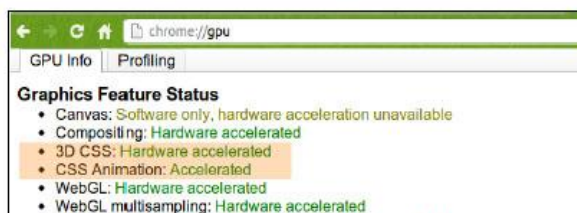
Figure 4: "chrome//gpu" 3D hardware acceleration

If this is not the case, try the following:

- Enter "chrome://flags" in the address line.
- Activate the "Overwrite Software Rendering List" function and restart the Chrome browser.
- Open our website "www.bab-tec.de", open our demo visualisation version for CUBEVISION in the "Service" menu and test the presentation.
- If you notice that the browser now responds in an unstable manner, deactivate this option as described above. Unfortunately, it is then not possible to run CUBEVISION on your device.

2.2.2 ESTABLISHING CONNECTIONS

In order to configure the **CUBEVISION**MODULE and to retrieve the visualisation, a current browser and a network connection to the device are required. If the device is in the condition on delivery, it can be accessed at the above-mentioned IP address and the network settings must be adjusted to the address range, where necessary. To do this, please follow the instructions provided in chapter "Adjusting the network settings of your computer".

2.2.2.1 DISCOVERYTOOL

If you do not know the network settings of the device, the DiscoveryTool can help you to find out with which IP address the device is available. The "DiscoveryTool" software is platform-independent and can be run on any operating system. It can be found on the supplied CD or in the download section at www.bab-tec.de.
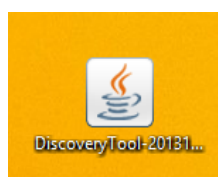
Figure 5: DiscoveryTool icon

Double-click the program icon in order to start the software. All devices available in the network are shown in the program window with their respective device names and serial numbers. A **CUBEVISION**MODULE can be recognised by means of a serial number starting with "BT103…"!
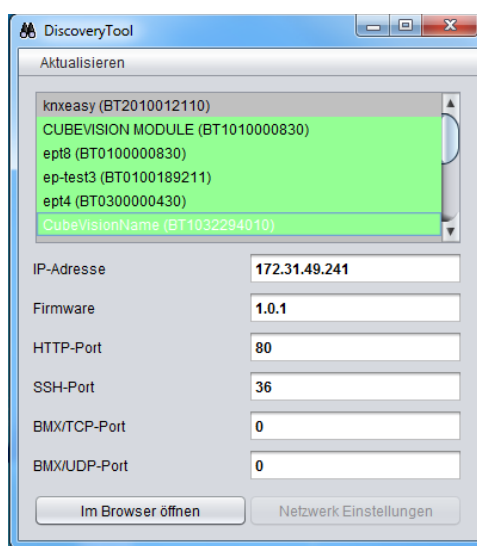
Figure 6: DiscoveryTool

The colour marking of the devices shown in the DiscoveryTool has the following meaning:

- Grey = Information is being retrieved
- Green = Device is in the same network area as the PC
- Yellow = Device is NOT in the same network area as the PC

Mark the required device in the list. The device information available is displayed in the fields below. If the device is marked green, you can immediately call up the start page of the device by pressing the "Open in Browser" button. If the device is marked yellow, change the network settings of your PC correspondingly (see chapter below).

2.2.2.2   ADJUSTING THE NETWORK SETTINGS OF YOUR COMPUTER

In order to adjust the network settings of your computer and establish a connection to the device, please proceed as described below:

- Open the IP address settings (under Windows 7):
- Click "Start Button" --> "Control Panel" --> "Network"
- Select "Network Connection", then "LAN Connection" ("Intel PRO1000 GT" in the figure below).

Figure 7: Windows Network and Sharing Center

- Then click "Properties":
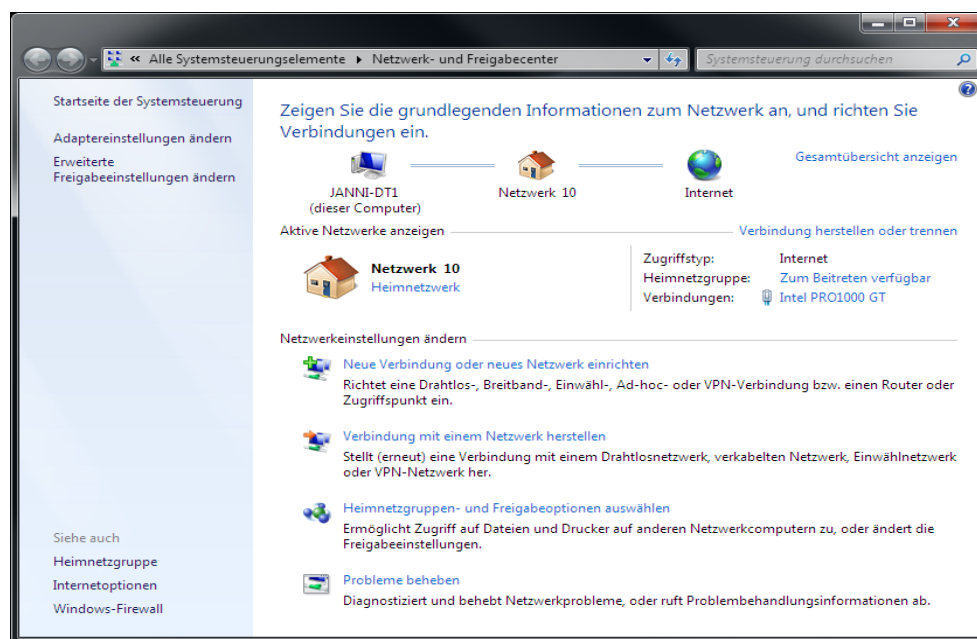
Figure 8: "LAN Connection" status
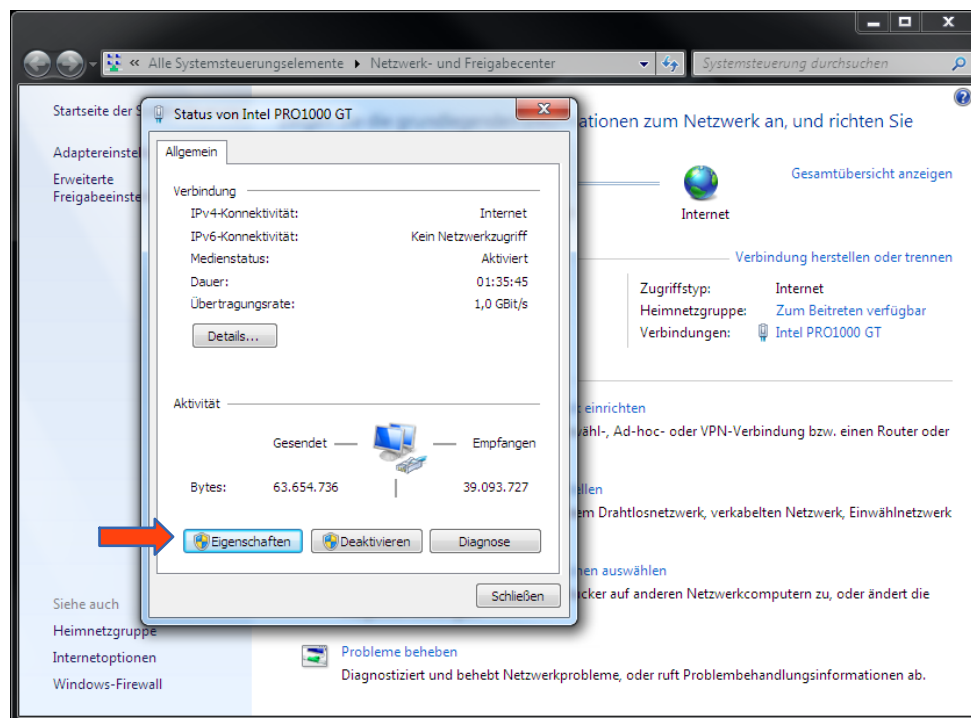
- Select "Internet protocol Version 4 (TCP/IPv4)" and click "Properties" again:
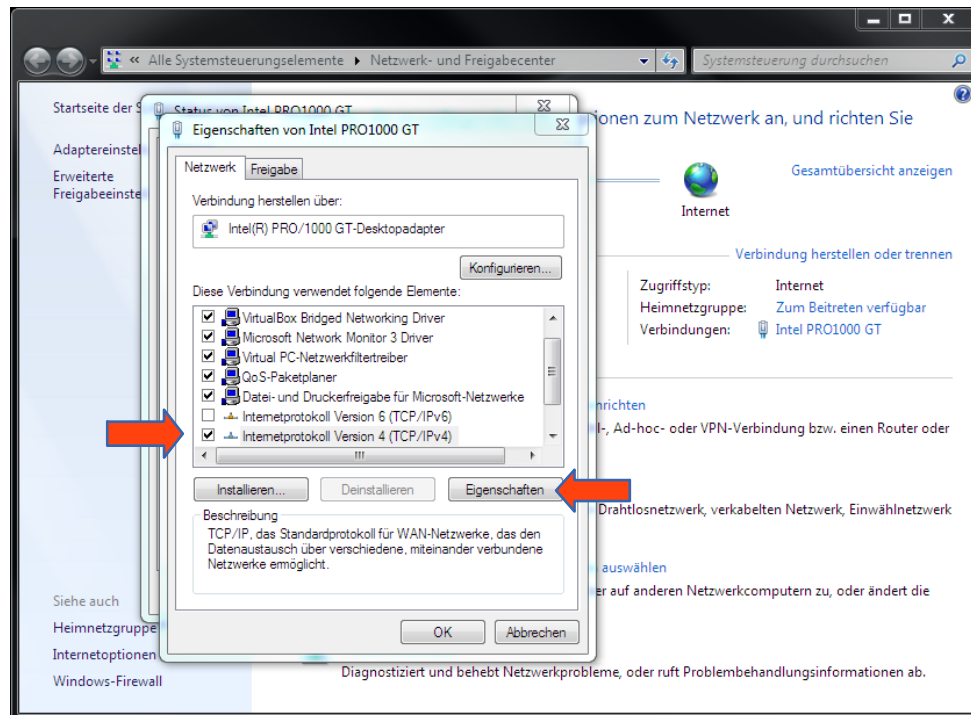
Figure 9: Properties of the LAN connection

- Now note down the current IP address settings or take a screenshot in order to ensure that you can reset the IP address setting following the configuration of the **CUBEVISION**MODULE.
- Now change the IP address settings (IP address and subnet mask) as required:
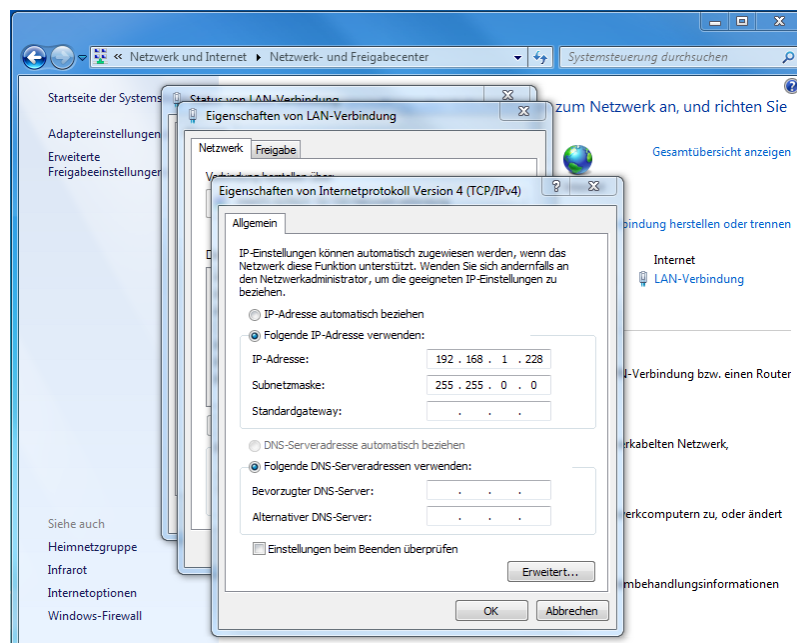
Figure 10: TCP/IPv4 properties

Example of a valid configuration for the factory settings of the **CUBEVISION**MODULE:
- Free IP address: 192.168.1.228
- Subnet mask: 255.255.255.0

- Now confirm your input with "OK".
- Close all windows until the "Windows Network and Sharing Center Settings" window is shown.

Thus, you have adjusted the network settings of your PC to those of the **CUBEVISION**MODULE. The web interface of the MODULE can be accessed by means of the browser. Restore the original network settings of your PC by following the steps described above as soon as you have configured the **CUBEVISION**MODULE correspondingly.

PORT SETTINGS

If the connection between the **CUBEVISION**MODULE and client is monitored by means of a firewall or if access from the Internet is to be made possible, the following port settings must be taken into account:

Visualisation: TCP Port 80 (http)

Configuration: TCP Port 80 (http)
                            TCP Port 36

Note: If you wish to make your CUBEVISIONMODULE available via the Internet, please protect such access using strong and secure passwords. In this respect, comply with the currently applicable password rules.

2.2.2.3   ADJUSTING THE NETWORK SETTINGS OF THE CUBEVISION MODULE

If the network prerequisites have been created, you can now access the configuration of the **CUBEVISION**MODULE in order to adjust the network settings to the local requirements there. To do this, please proceed as described below:

- Enter the IP address of the **CUBEVISION**MODULE in the address line of your browser (for factory settings: 192.168.1.229).

Figure 11: Start page

- The start page of the **CUBEVISION**MODULE opens up. Click "Log In" on the top right-hand corner of the screen (see figure above, orange circle).
- A login dialog appears. For factory settings, the login data is as follows:

Username: **admin**
Password: **admin**

Figure 12: Login dialog

Note: The password must be changed immediately when logging in for the first time. If the password is lost, the device cannot be reset!

Note: Logging in only works if the browser is authorised to save cookies!

- The view on the start page changes. You can now access the following levels:

    - CUBEVISION
    - CUBEVISION EDITOR
    - CONFIGURATION
    - INFORMATION

- In order to change the IP address of the **CUBEVISION**MODULE, please click "CONFIGURATION" (see orange circle, figure below).
-
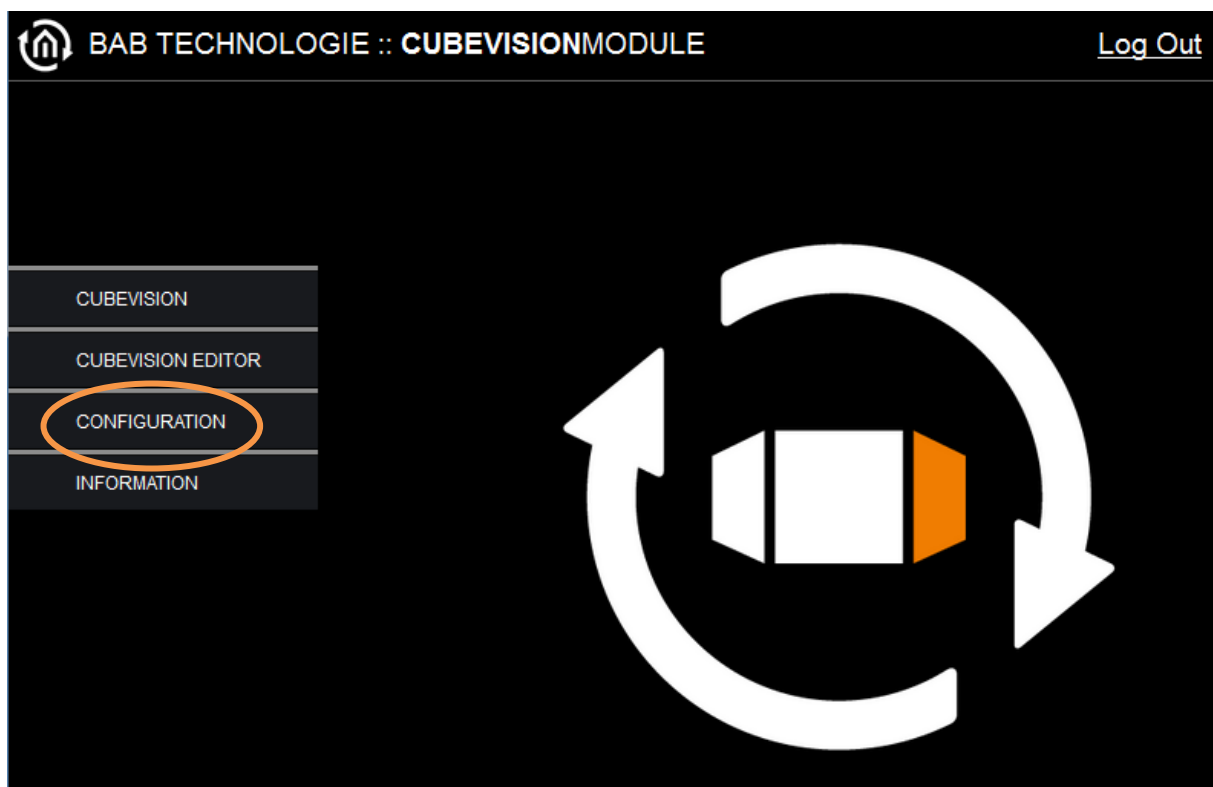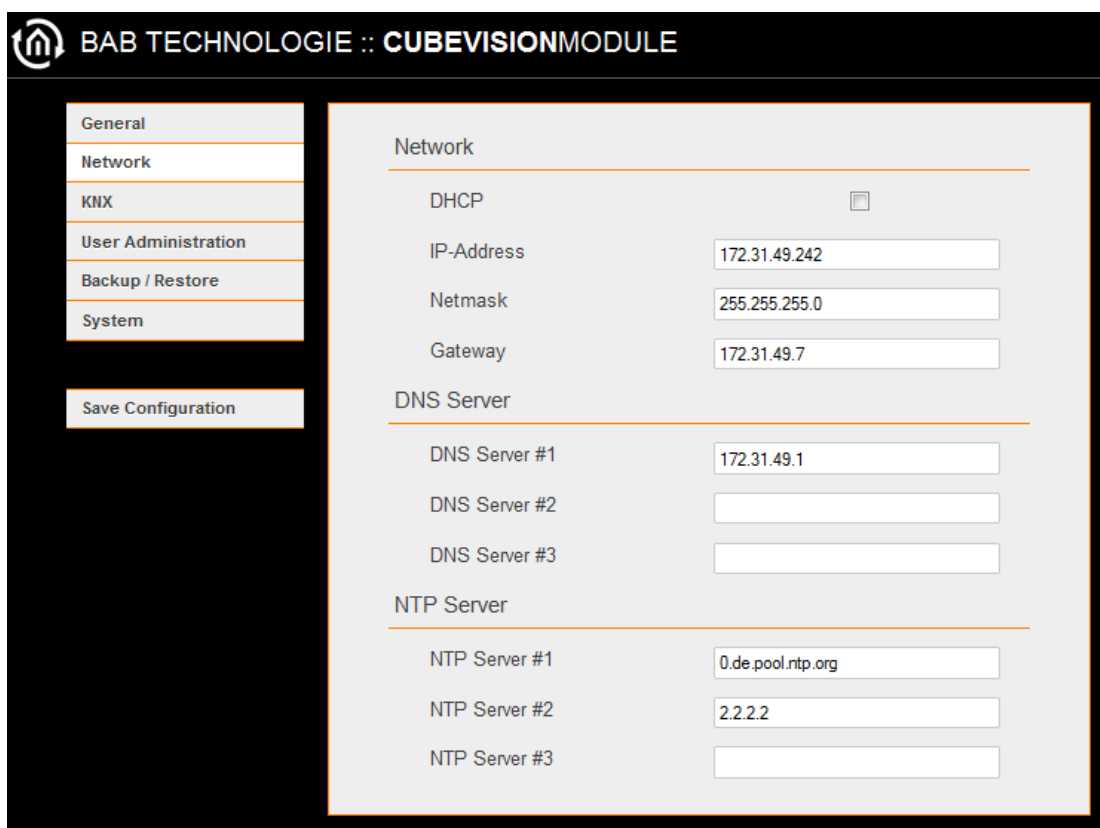
Figure 13: CUBEVISIONMODULE main menu

The configuration menu opens up. You can make the following settings in the "Network" menu item:

DHCP:	If DHCP is active, the device automatically obtains the network settings. A DHCP server must be available in the local network.
IP address / subnet mask / gateway:	If DHCP is not active, the network settings must be carried out statically. In case of doubt, contact your network administrator as to which settings are to be carried out. Please note that an IP address may never be assigned twice.
DNS server:	DNS is the abbreviation for Domain Name System. The DNS server converts Internet addresses, for example "www.bab-tec.de" into the IP address "85.214.89.170" and vice versa. Without a valid DNS entry, NTP, weather services from the Internet and UPnP do not work.
NTP server:	NTP is a free service for synchronising the system time of Internet-compatible devices. If no time synchronisation is required, please check the system time from time to time in the "General" menu item. NTP server list: e.g. http://www.pool.ntp.org/zone/europe

Figure 14: CUBEVISIONMODULE network configuration

Change the IP address settings as required. In order to save the settings made, click "Save Configuration". The server in the device is restarted, the browser automatically connects to the new IP address if possible.

Note: Please bear in mind that you might have to reset the IP address of your computer to the initial value in order to be able to access the CUBEVISIONMODULE after the change has been made.

Special feature when activating DHCP
If you have activated DHCP for the CVM according to the steps mentioned above, please use the DiscoveryTool as described in chapter "DiscoveryTool" in order to find out the current IP address configuration of the device.

3 CUBEVISION VISUALISATION

CUBEVISION is one of the most innovative visualisations. The design and layout of the visualisation are created automatically and the user must only specify the building structure and link the functions. CUBEVISION automatically scales to the screen size and opens up either in the "Phone" or in the "Tablet" presentation depending on the resolution.

"Tablet" presentation

Figure 15: Tablet presentation

"Phone" presentation
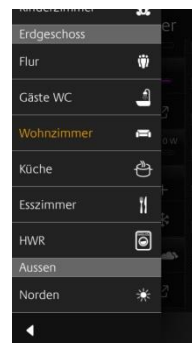
Figure 16: Phone presentation, room navigation

Figure 17: Phone presentation

3.1 USING CUBEVISION IN A BROWSER

Note: The visualisation uses the most recent HTML 5 browser technology. For this reason, it is important to only use the recommended browsers for the CUBEVISION presentation.

In order to start CUBEVISION in the browser, call up the start page of the **CUBEVISION**MODULE and click "CUBEVISION". You then access the project (building) selection.
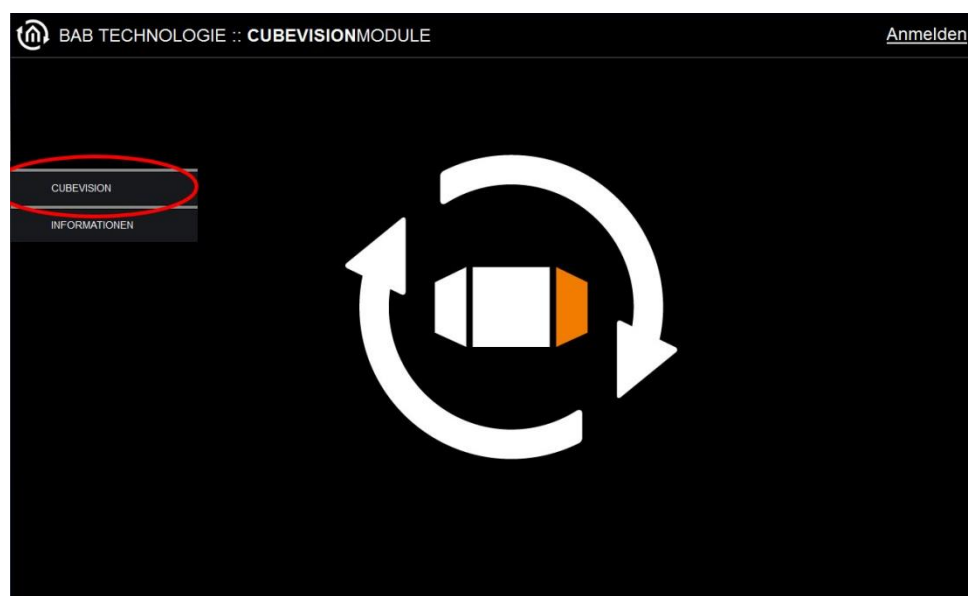
Figure 18: Calling up CUBEVISION

Overview of the recommended browsers and presentations on different terminal devices

PC:
- Browser: Google Chrome, Mozilla Firefox
- Possible presentation: Phone, tablet

MAC:
- Browser: Apple Safari
- Possible presentations: Phone, tablet

Android tablet:
- Browser: Google Chrome
- Possible presentations: Phone, tablet

Android phone:
- Browser: Google Chrome
- Possible presentations: Phone (tablet not recommended)

Apple (iOS) tablet:
- Browser: Apple Safari
- Possible presentations: Phone, tablet

Apple (iOS) phone:
- Browser: Apple Safari
- Possible presentations: Phone (tablet not recommended)

Windows phone / tablet:
- Browser: Internet Explorer
- Possible presentations: Only phone

3.2   CONFIGURING THE PRESENTATION

The presentation of CUBEVISION is usually carried out automatically. This means that CUBEVISION recognises automatically which resolution is to be presented and scales correspondingly. From a resolution of 1,024 x 768 pixels and above, the tablet presentation is chosen. In order to make manual adjustments to the presentation, please proceed as described below:

- Presentation in the browser: Open the CUBEVISION menu item in the main menu of the **CUBEVISION**MODULE.
- Presentation in the APP: Close an already opened APP via the task manager of your mobile device and open it again so that you can access the start screen of the APP (see chapter "Using the CUBEVISION APP")
- Click "Setting" (see figure below, orange circle).
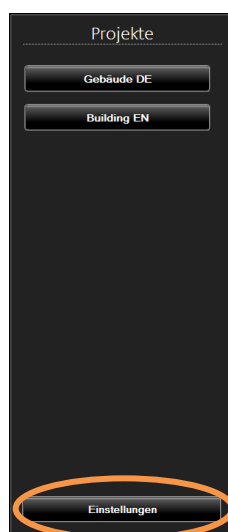
Figure 19: CUBEVISION presentation settings

- You can change the presentation in the following menu. You have the following configuration options:

Automatic   If you select "Automatic" presentation, presentation is adjusted automatically. If your visualisation device supports a resolution of 1,024 x 768 pixels, the visualisation adjusts to the tablet presentation.

Tablet   In this setting, the visualisation is always shown in the tablet presentation irrespective of the screen resolution.

Phone   In this setting, the visualisation is always shown in the phone presentation irrespective of the screen resolution.

- Confirm your selection with "OK" and call up the required visualisation project (building).

3.3 USING IN CUBEVISION APP

For iOS and Android devices, an APP for calling up CUBEVISION is available in the respective stores. This APP is called "CUBEVISION APP". The application is free of charge. In order to call up CUBEVISION from the **CUBEVISION**MODULE in the APP, please proceed as described below:

- Install the APP from the respective store (Google Play, Apple AppStore).

Figure 20: CUBEVISION APP icon

- Start the application. The start screen of the APP opens up. If CUBEVISION-compatible end devices (EIB**PORT** and **CUBEVISION**MODULE) have already been added before as favourites, they are listed here. They can be deleted again using the "Delete favourites" button. The start settings of the visualisation are changed using the "Settings" button (see chapter "Configuring the presentation").

Figure 21: CUBEVISION APP start screen

- In order to add a new server (device), click the "Search for server" button. A second screen opens up and shows you all devices available in the network with their respective serial numbers. Both EIB**PORT** (serial number starts with "BT01") and **CUBEVISION**MODULE ("BT103") are displayed.
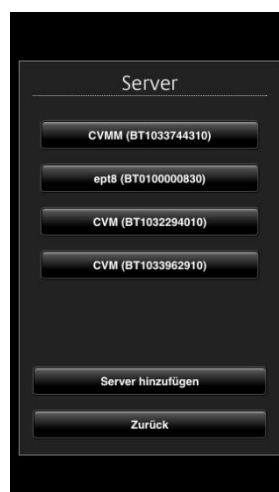
Figure 22: CUBEVISION APP server selection

- If the required server (device) is not available, an additional server can be added using the "Add server" button by entering the respective hostname and http port.

Figure 23: CUBEVISION APP adding server

- If there are several CUBEVISION projects (buildings) on the required server (device), a project (building) selection is shown after the server has been selected. In order to save the server as a favourite in the above-mentioned list of favourites, the "Save as favourite" check box must be activated.
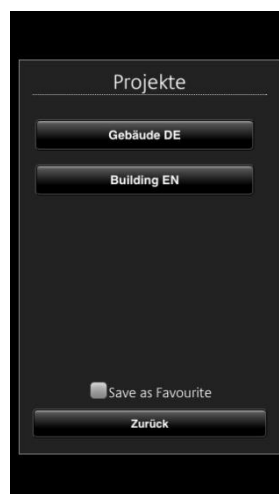
Figure 24: CUBEVISION APP project (building) selection

After the required project (building) has been selected, the visualisation is started with the start page set and specified in the configuration.

4 CUBEVISION NAVIGATION

This chapter describes how to operate and navigate CUBEVISION. In addition to this, the individual elements are explained in order to get familiar with all CUBEVISION special features, techniques and automatic procedures.

There are two types of presentation as described in the chapter above: "Tablet" and "Phone".

The elements of the "Tablet" presentation are as follows below:

- View of room and navigation
- Quick Navigation
- Instant Control Panel [ICP]
- Extended Control Panel [ECP]
- Extended Element View [EEV]

The elements of the "Phone" presentation are as follows below:

- Room Navigation
- Central View
- Favourites
- Room View
- Extended Element View [EEV]

4.1 CUBEVISION IN TABLET PRESENTATION

Navigation through the building structure takes place by horizontally and vertically sliding in the mode room view.

Room view:
By room view, this sight will be intended, which shows a room, more precisely the front surface of a cube. This surface will be used for navigation.

Navigation:
As it will been shown in the following two figures, shifting from room to room by a horizontal finger movement is possible. In horizontal direction exits no limits. This means, that after the last room the first room will be displayed again.
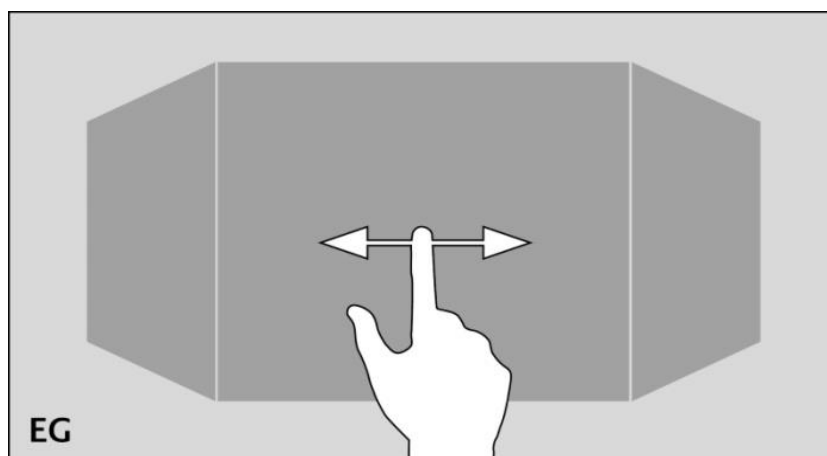
Figure 25: Horizontal finger movement for shifting the room

The vertical finger movement serves for navigation through levels resp. floors. If the end of vertical direction will be reached, an orange coloured corona appears at the border below or at the top end, according to which direction the user`s moving takes place. This indicates the end of vertical direction.
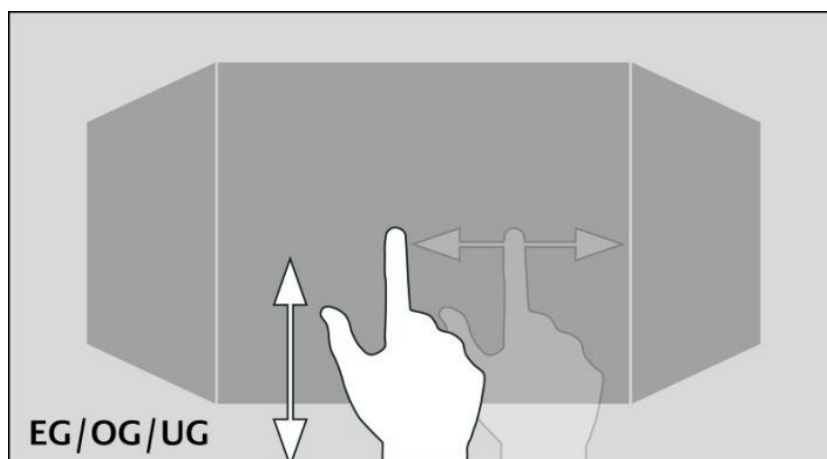
Figure 26: Vertical finger movement for shifting levels

One of the major advantage of CubeVision element is, that the user doesn`t have to be worry about navigation between rooms or levels. Working with changeover elements, how its known in classical visualization, is cancelled completely. As well the testing of the navigation: if somewhere the user will be toddle into a deadlock, from which he can`t get back to the front page, because a changeover element is simply absent on this visualization page.

Please note: To reach a room directly and without detours (also in another level), quick navigation can be applied.

4.1.1   QUICK NAVIGATION

In the mode Quick Navigation, all rooms will be displayed at one side for faster navigation. In this way, user can switch directly to each and every room. The creation of an overview for all rooms takes place automatically.

Opening of Quick Navigation:
Quick Navigation can be started in two different forms.
- Over the complete area of the room view
- By an arrow, this will be displayed downright in the room view.

The option how to start Quick Navigation can be adjusted in the configuration window (see figure 5) of the CubeVision element (in visualization editor).
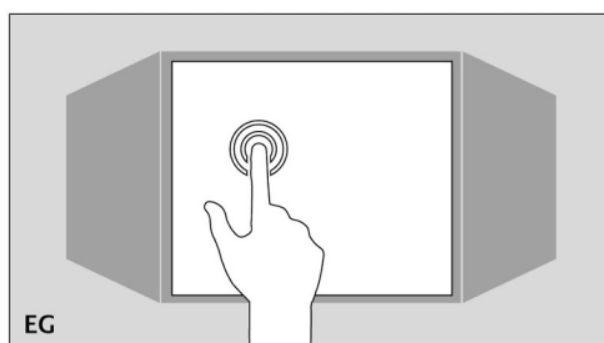
Figure 27: Starting Quick Navigation

Closing Quick Navigation:

By the exit symbol in Quick Navigation, the overview can be closed, to shift back to the room view.
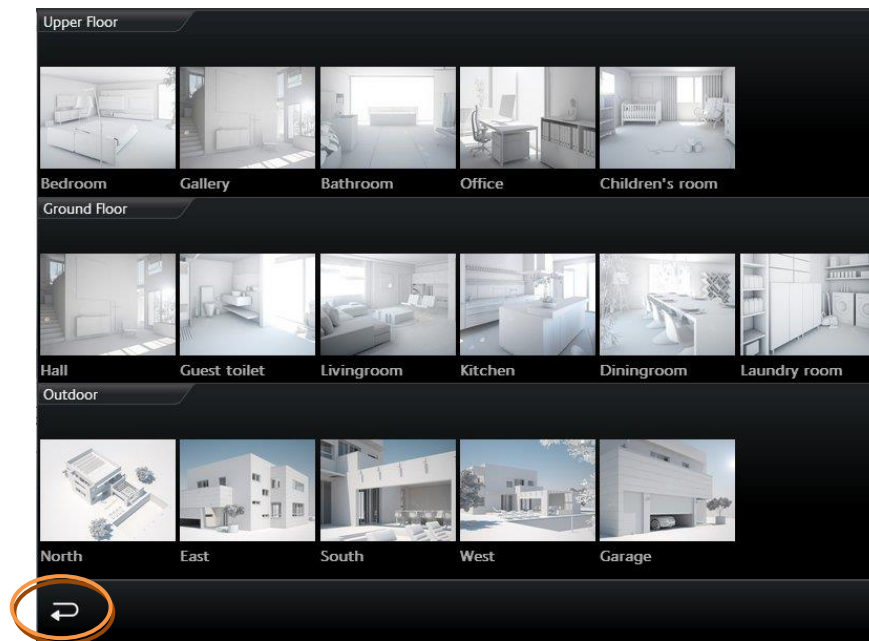
Figure 28: View of Quick Navigation

Please note: Quick Navigation can be disabled completely when necessary

4.1.2   INSTANT CONTROL PANEL [ICP]

Every room has an Instant Control Panel (shortened ICP), which always will be located on the right side. In the first place of Instant Control Panel, the name of the room appears. The position of Instant Control Panel can`t be changed (see figure 7).

Instant Control Panel provides space for max. 8 elements of visualization (the elements have a height from 1 to 8 units)

If there is not enough space in the Instant Control panel:

If for visualization elements of the room more than 8 height units will be required, the elements, which doesn`t fit into the Instant control Panel, will be displayed in the Extended Control Panel (see next chapter).

It automatically appears a "more" – button below the Instant Control Panel, by which the Extended Control panel can be activated. (see figure 9)

Instant Control Panel and **favourite function:**

Instant Control Panel has a particular function, which allows to arrange elements in order of their importance.

This means, that the most often used elements in one room can be displayed in the room view and therefore they could be operated directly.

The favourite function controls, how often the user will utilize particular elements and so it sorts the order of the elements on this basis in Instant Control Panel. This means in effect for example, that if in winter time Christmas illumination in the garden will be controlled often, this element will also be displayed in Instant Control Panel.

No configuration is necessary. Solely these elements have to be marked, which should be observed as favourite elements. This will be described more precisely in chapter "elements."

To position visualization elements manually in Instant Control Panel
As desired, even so elements of the room can be positioned manually. Therefore the favourite function will be disabled and a place in the order in Instant Control Panel will be given to the element.

Figure 29: Instant Control Panel (seen on the right side)

4.1.3   EXTENDED CONTROL PANEL [ECP]

All elements, which are used in a room, will be displayed in the Extended Control Panel (shortened ECP). So all elements of the Instant Control Panel, too. The creation takes place automatically.

Extended Control Panel:
- In this view 4 columns are displayed always at least.
- Every column has 8 height units.
- If 4 columns doesn`t be enough, a page can be added when necessary.
- By column break, elements can be arranged in the columns thematically.

Opening and closing of Extended Control Panel:
Extended Control Panel will be opened by the button "more…". This button will be displayed only on demand. By the exit-symbol (arrow at lower left, see figure 9) this view can be closed.
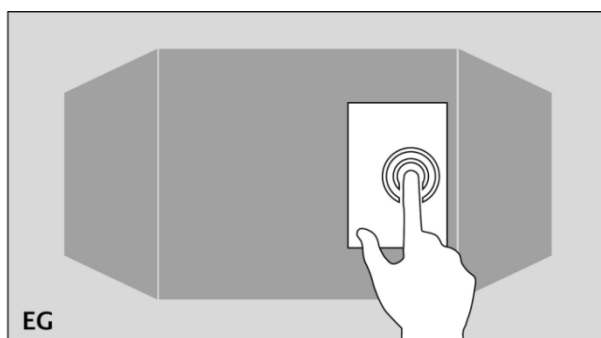
Figure 30: Opening of Extended Control Panel. Click on "more…"

Figure 31: ICP expansion
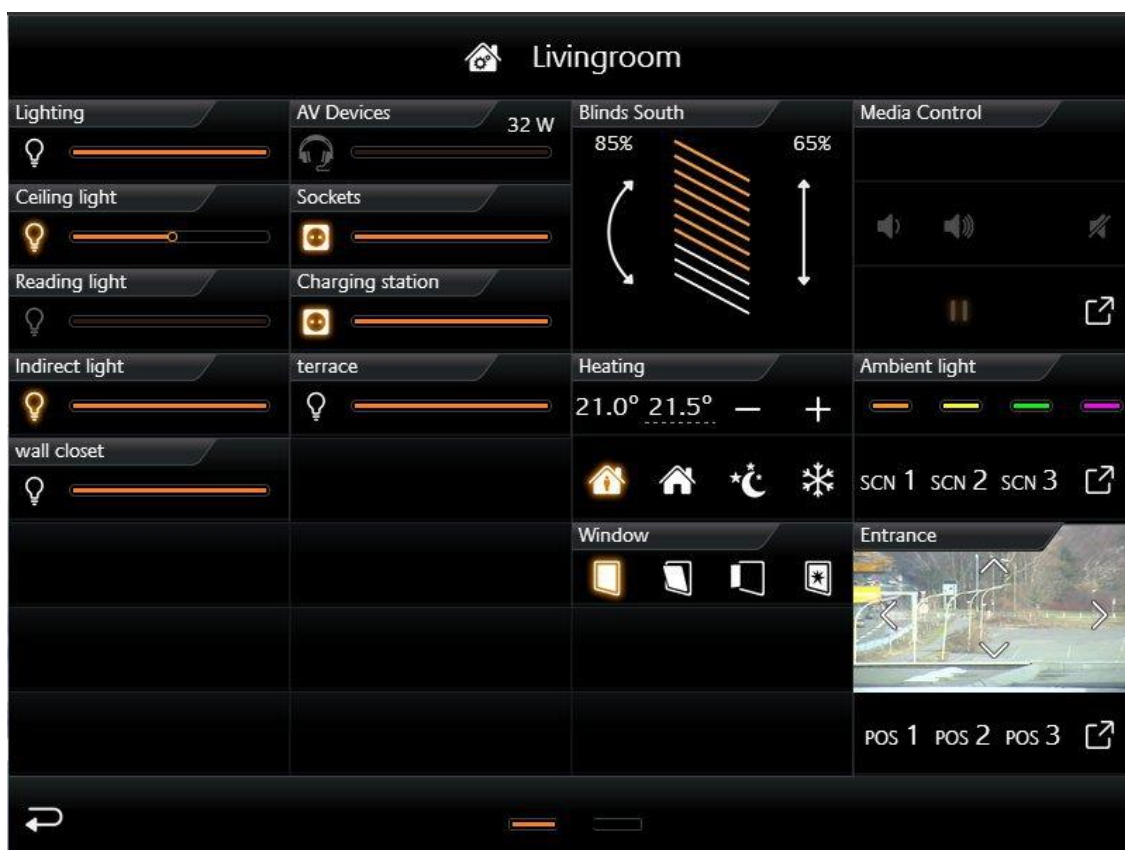
Figure 32: Extended Control Panel

4.1.4 EXTENDED ELEMENT VIEW [EEV]

Extended Element View (shortened EEV) offers an another view of elements, in which more information (as cover, diagram, large pictures of cameras, …) can be outlined.
Extended Element View has got 5 elements (State firmware 3.2.0)

- RGB Control
- Camera
- Multimedia
- Weather (Internet)
- Values / diagrams

In visualization, the access to Extended Element view is illustrated by a rectangle, from which one arrow points upwards to the right. It is located inside the element on the bottom right (see figure 10).

Example:
This extended element view is generated fully automatically. The extended element view of the Internet Weather Symbol is shown in the figure above and marked by an orange circle.
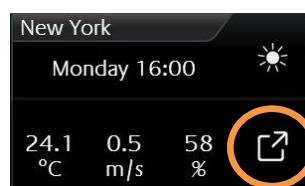
Figure 33: Example Internet Weather

A click on the symbol on the bottom right will open the extended view (Extended Element View). This extended view of internet weather will be shown in the figure below marked by an orange circle..

Figure 34: Example „Internet Weather" in Extended Element View

If in a room several similar elements will be inserted with extended view:
In our example, two internet weather elements have been inserted in the kitchen. The first shows the local weather (Dortmund) and the other displays the weather of New York. CubeVision Extended Element View integrates both in a list on the left side (see figure 11). In this way, the user can switch between both elements back and forth.

4.1.5   CENTRAL VIEW

"Central View" is an additional function allows a room-independent central overview of the required functions. Each visualisation element includes the "Central View" menu item and can thus be assigned the required central view.

Here, it is possible to add categories to the "Central View" menu according to your own wishes and requirements.

To do this, please proceed as described below:
- Click the [▶] symbol (see figure on the right-hand side, red circle).
- A new window opens up, in which you can now create new categories.
- Operations (see figure below, "Add category"):
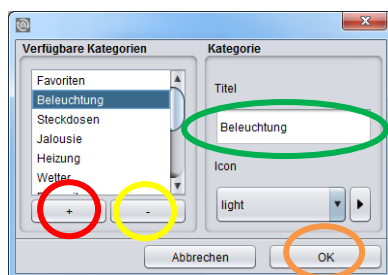
Figure 36: Adding category
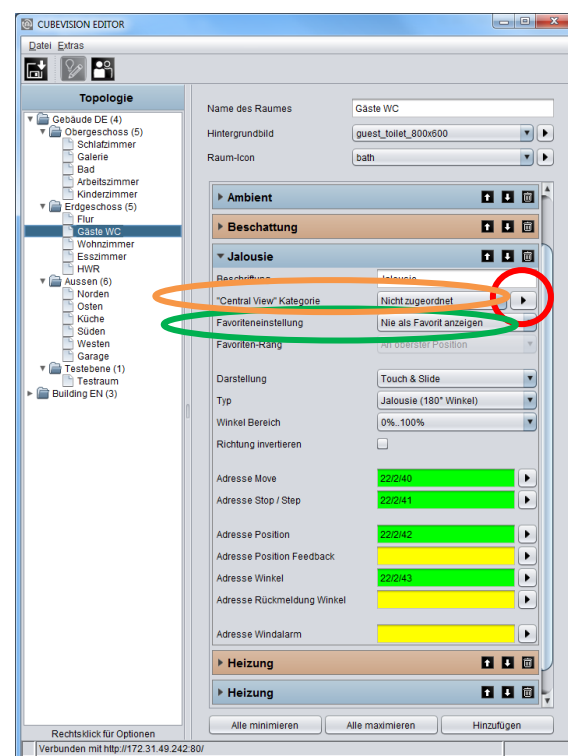
Figure 35: Central View

Symbol	Functions
"+"	By clicking "+", a category can be added.
"-"	By clicking "-", a category can be removed.
Title	Here, the category can be assigned a title.
Icon	Here, you select a specific icon for the category.
▶	Click this symbol to add an individual picture for the icon.
Cancel	By clicking "Cancel", you cancel the adding process.
OK	By clicking "OK", a new category is saved.

As soon as the control element has been assigned a required "Central View" category, the corresponding menu item is generated in a status line above CUBEVISION in the tablet presentation.

In this way, it is possible to generate any group of control elements in the "Central View" menu.
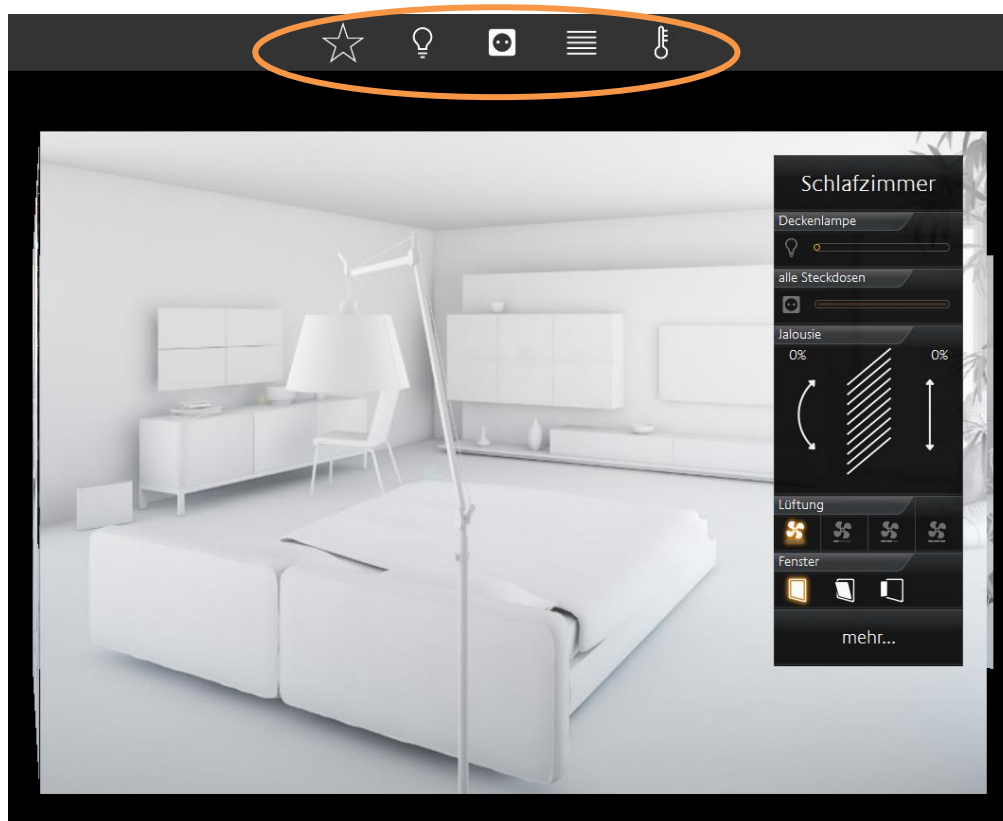
Figure 37: Central View visualisation

4.2   CUBEVISION IN THE PHONE PRESENTATION

It is possible to navigate through the building structure by sliding horizontally, sliding vertically and touching. Thus, intuitive operation of the visualisation on the smartphone is ensured. The phone presentation is designed in such a way that so-called "one-thumb operation" is possible (depending on the screen size).

4.2.1   NAVIGATION

The navigation through the building structure in the phone presentation differs from that in the tablet presentation. In order to access the visualisation on different floors or in different rooms, you must touch the symbol (see figure below, orange circle).

Figure 39: Opening room navigation

Figure 38: Room navigation

You can access the room navigation (see figure on the right-hand side).
In general, it depends on how many floors and rooms were created in the topology.

In this example, there are four "layers":

- Central View (see chapter "Central View")
- First Floor
- Ground Floor
- Outside

In order to access the required page, just touch the corresponding menu item.

Navigation within a room [room view]

If you have used the "Column Separator" element during configuration in order to categorise the elements, switch between the columns within a selected room by sliding horizontally.
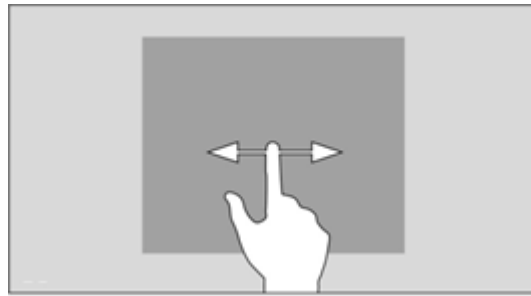
Figure 40: Sliding horizontally

Navigation – within the columns of a room

The control elements within the columns are arranged one below the other. As of a certain number of control elements, they protrude from the visible area of the screen. In order to access the required control element, sliding vertically is required.
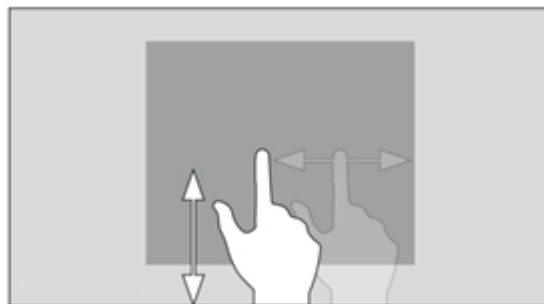
Figure 41: Sliding vertically

Operating an element

By "touching" a control element, it is activated for the respective condition. The surrounding functions are shaded in order to visually mark the selection and make it clear. Only then can the control element be operated correspondingly. In order to exit this mode, it is necessary to touch the screen outside the operable area.
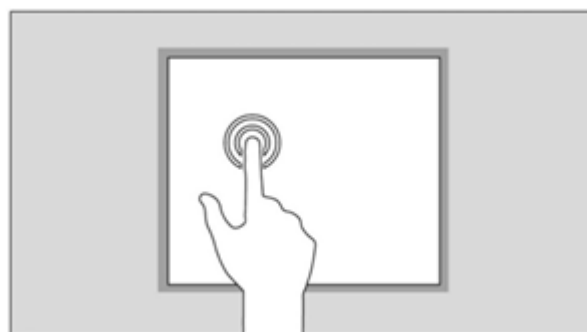
Figure 42: Touching

4.2.2   CENTRAL VIEW

"Central View" is an additional function allows a room-independent central overview of the required functions. Each visualisation element includes the "Central View" menu item and can thus be assigned the required central view.

Here, it is possible to add categories to the "Central View" menu according to your own wishes and requirements.

To do this, please proceed as described below:
- Click the [▶] symbol (see figure on the right-hand side, red circle).
- A new window opens up, in which you can now create new categories.
- Operations (see figure below, "Add category"):
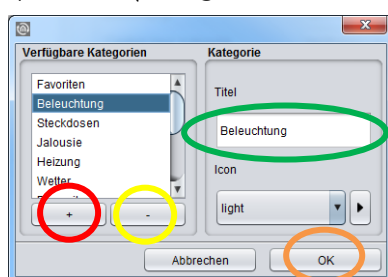
Figure 44: Adding category
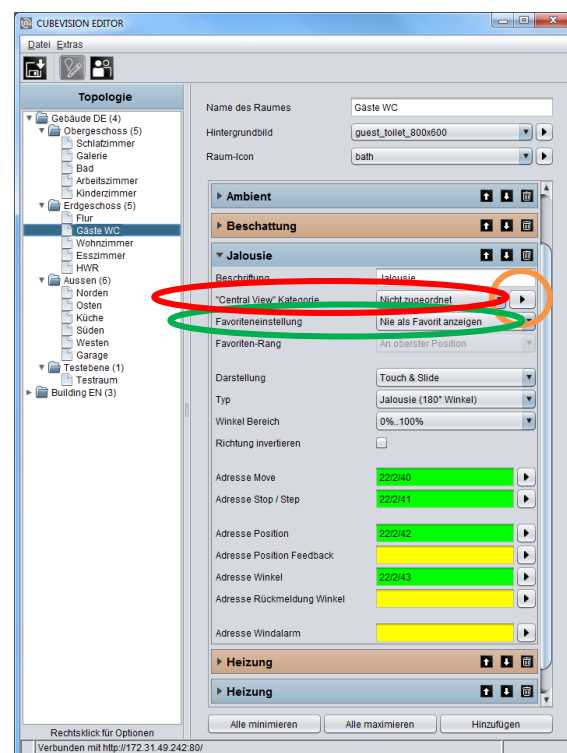
Figure 43: Central View

Symbol	Functions
"+"	By clicking "+", a category can be added.
"-"	By clicking "-", a category can be removed.
Title	Here, the category can be assigned a title.
Icon	Here, you select a specific icon for the category.
[▶]	Click this symbol to add an individual picture for the icon.
Cancel	By clicking "Cancel", you cancel the adding process.
OK	By clicking "OK", a new category is saved.

As soon as the control element has been assigned a required "Central View" category, the corresponding menu item is generated in a status line above CUBEVISION in the tablet presentation.

4.2.3 FAVOURITES FUNCTION

Upon request, the favourites function generates an automatic sorting of the control elements according to how frequently they are used (clicked). To do this, the control elements are sorted into the "Favourites" column provided in the phone presentation, whereas the respective control elements are sorted into the Instant Control Panel [ICP] in the tablet presentation.
In order to ensure that a control element is considered by the favourites function, the following settings must be taken into account in the control element configuration.

Option	Functions
Automatic	Here, functions are added to favourites according to the frequency of clicks.
Always show as favourite	Here, functions are always added to favourites.
Never show as favourite	Here, functions are never added to favourites.
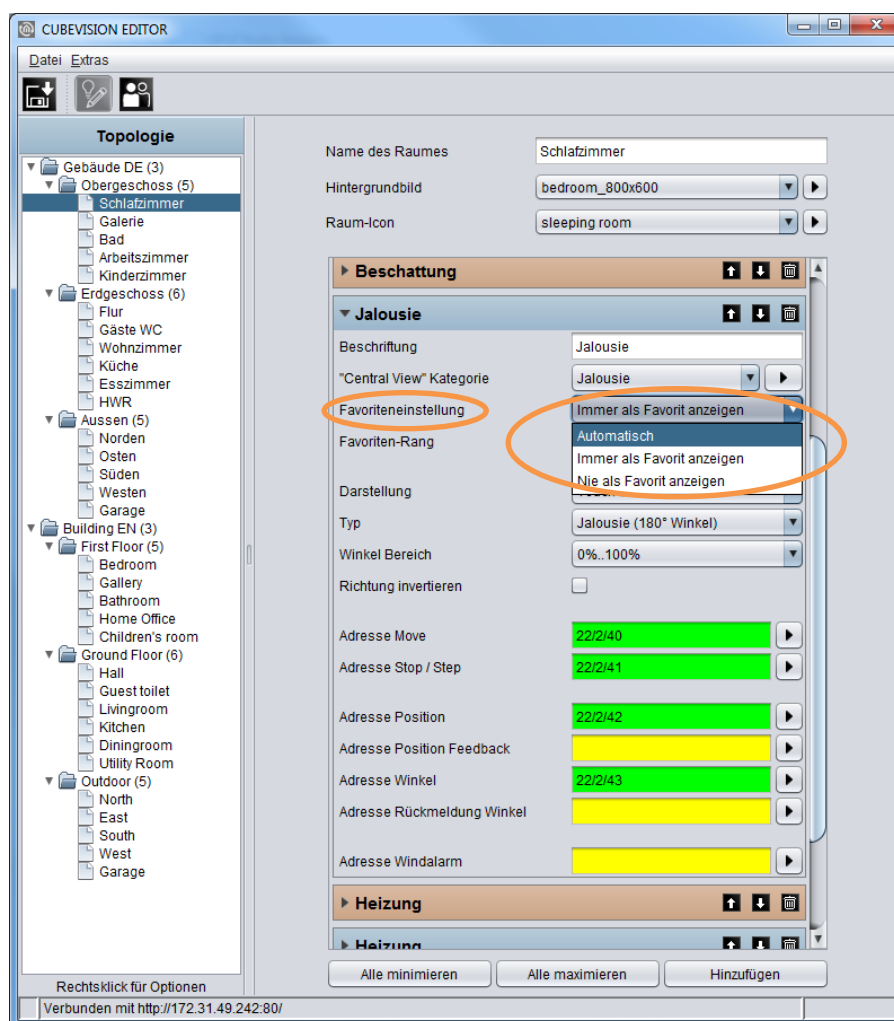
Figure 45: Favourites

4.2.4 COLUMN SEPARATOR

With the "Column Separator" control element, the user also has the option of influencing the assignment of the control elements to the individual columns in the phone presentation.

In the following example (see figure below), a "Column Separator" control element was inserted between "All Sockets" and "Blinds". Separating the columns, the "Blinds" control element is moved to the second column.

The column can be separated by clicking "Add" in the CUBEVISION Editor. The following window now opens up (see figure below, orange rectangle).
Now the "Column Separator" function can be selected; at the same time, the column separator can be assigned a title (name). This title specifies the group generated by the separation more precisely.

Example: In the "Controlling" column separator element (see figure below, green rectangle), all control elements by means of which something can be controlled (ceiling light, ventilation etc.) have been inserted.
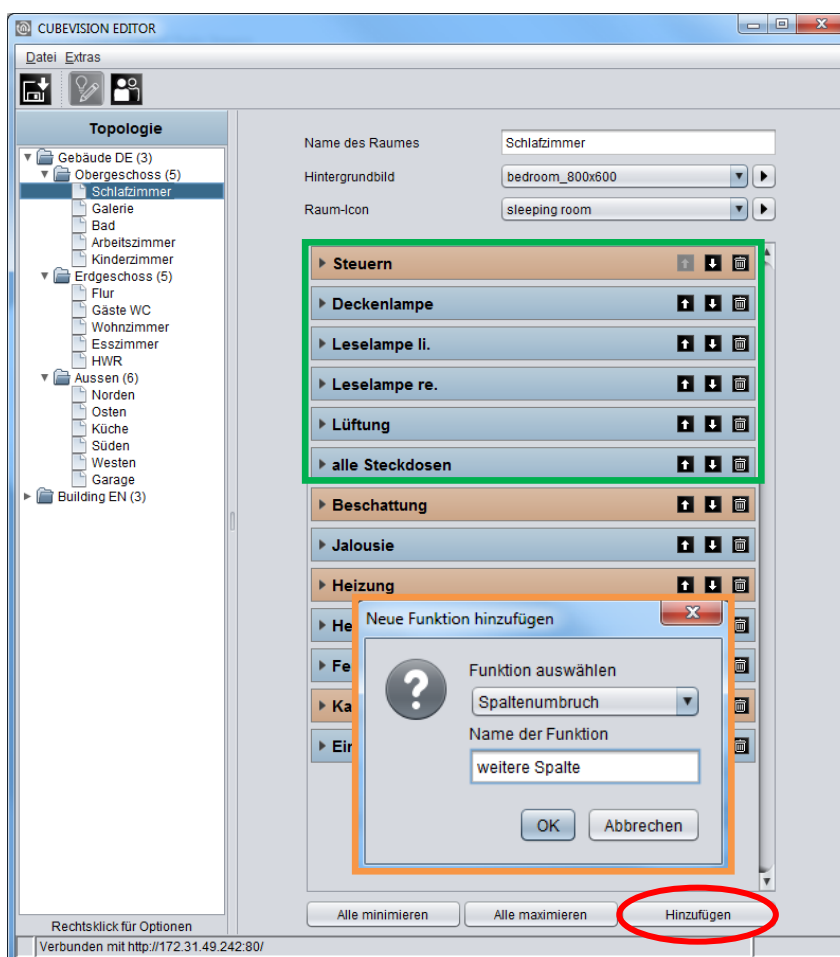
Figure 46: Column separator

5 CUBEVISION EDITOR

After you have connected to the **CUBEVISION**MODULE and logged in, the following start screen is shown. You can access the editor via the "CUBEVISION EDITOR" button in order to configure CUBEVISION.
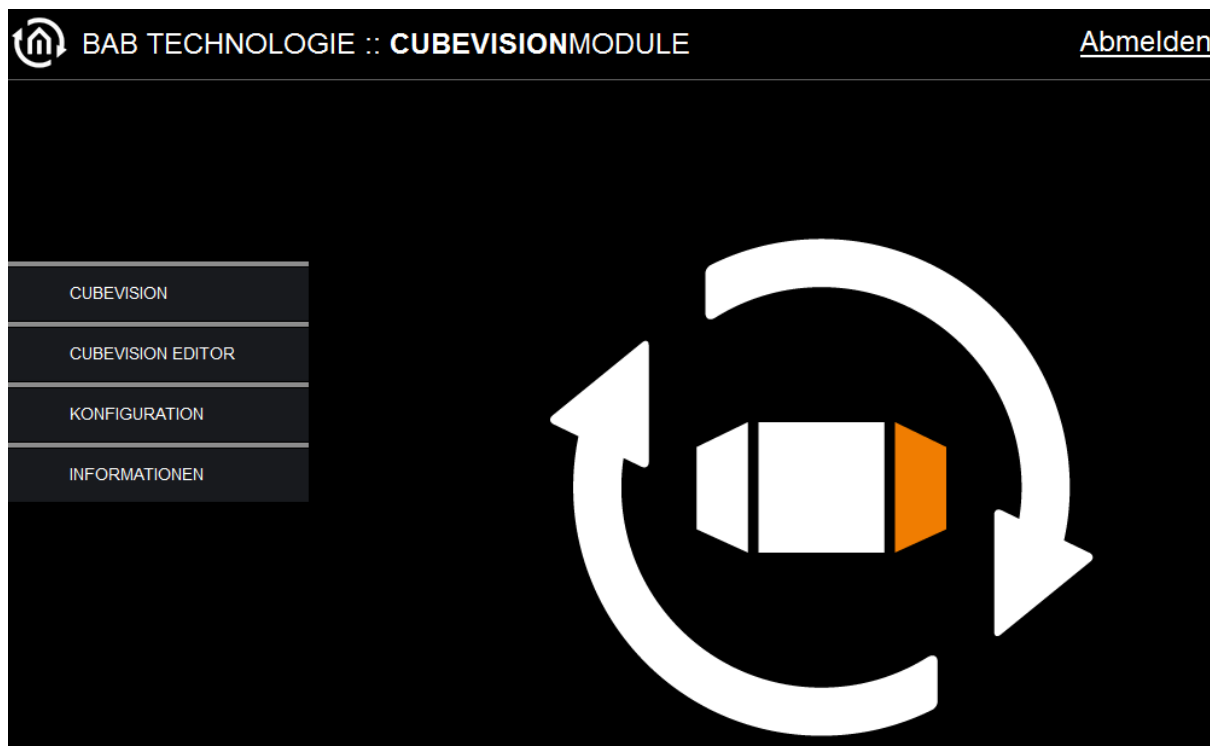
Figure 47: CUBEVISIONMODULE menu

5.1 JAVA SETTINGS / PREPARATIONS ON THE CLIENT PC

PC requirements

In order to be able to use the CUBEVISION Editor, you need Java and a browser. Thus, the editor is independent of the operating system. The actual CUBEVISION visualisation works without Java.

Java and browser versions

We recommend using a current version of Google Chrome, Apple Safari or Mozilla Firefox as a browser. Please note that a current Java version has been installed and that the Java browser plug-in is up-to-date. If Java has not been installed yet, you will find a current version at www.java.com. Please check the following settings of your computer before starting any work in the CUBEVISION Editor.
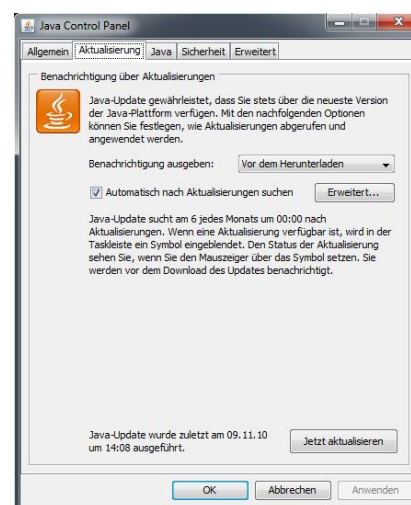
Figure 48: Updating Java

Deleting and deactivating temporary files

Please close all browser windows (also download windows etc.) and switch to the Java Control Panel via "Start" > "System Control" > "Java". On the first tab, "General", there are the "Settings" of the "Temporary Internet Files". Please remove the tick at "Leave Temporary Files on Computer" and delete all files using the "Delete files "button.
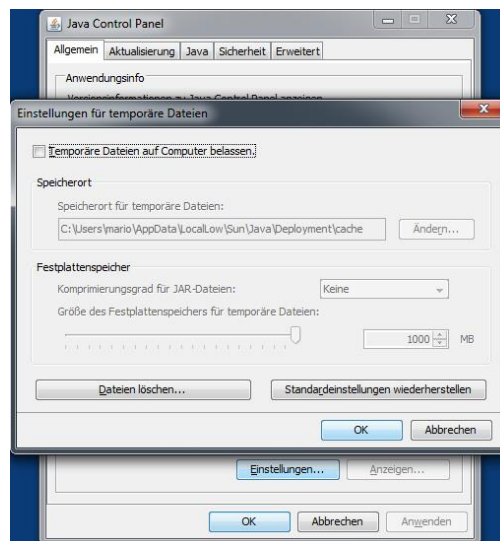
Figure 49: Deactivating temporary files

Expanding main memory for Java / deactivating old Java versions

Switch from the "General" tab to the "Java" tab. Please open the settings for the Java Runtime Environment via "Displays". The window shows you all Java versions installed on the computer; if several versions are installed, please de-install all versions except the current version. Double click into the "Java Runtime Parameters" field and enter "-Xmx256M"(pay attention to the minus sign). Then press "Enter" and leave the window using "OK".
In the "Java Control Panel" window below, it is important that you click "Apply" before closing the window with "OK".
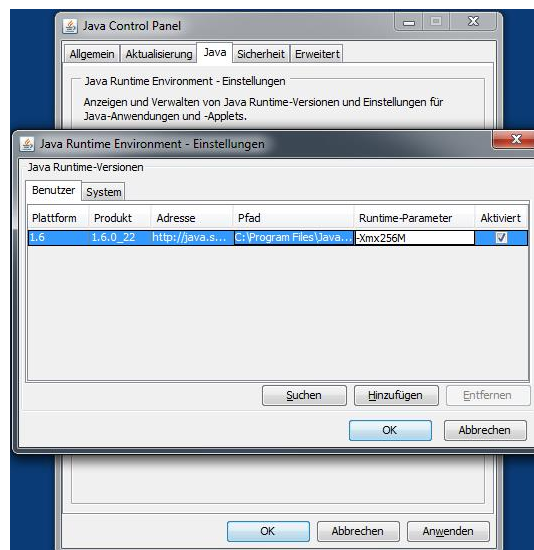
Figure 50: Expanding Java main memory

Afterwards, please also empty the cache data of your browser. Instructions on how to do this can be found on the Internet or in the help file of the browser. After all steps have been carried out and completed, the browser must be restarted.

5.2 STRUCTURE OF THE CUBEVISION EDITOR

In addition to the function for configuring the CUBEVISION visualisation, the CUBEVISION Editor offers further functions in the **CUBEVISION**MODULE.

5.2.1 THE "FILE" MENU

Localisation

In future, the localisation menu is to provide the option of adjusting the software language.
Address layers

In the editor, group addresses are displayed in two layers (mm/ssss) or three layers (mm/M/sss). Available group addresses are converted in the visualisation editor if necessary.
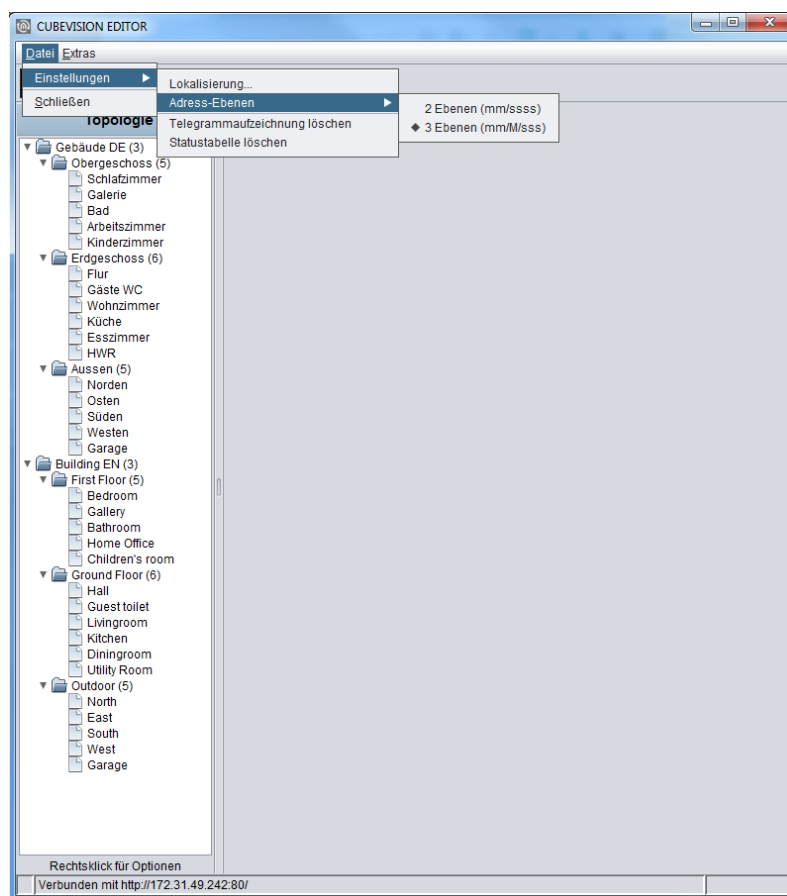
Figure 51: Address layers

Erasing history table

The **CUBEVISION**MODULE stores 500,000 messages. These lie in a SQLite database and can be used by the graph in the visualization. The last 20,000 telegrams simultaneously in the operating system itself deposit to you as with external programs to read. With this function, this record is deleted immediately, which are preserved 500 000 telegrams in the SQLite database.
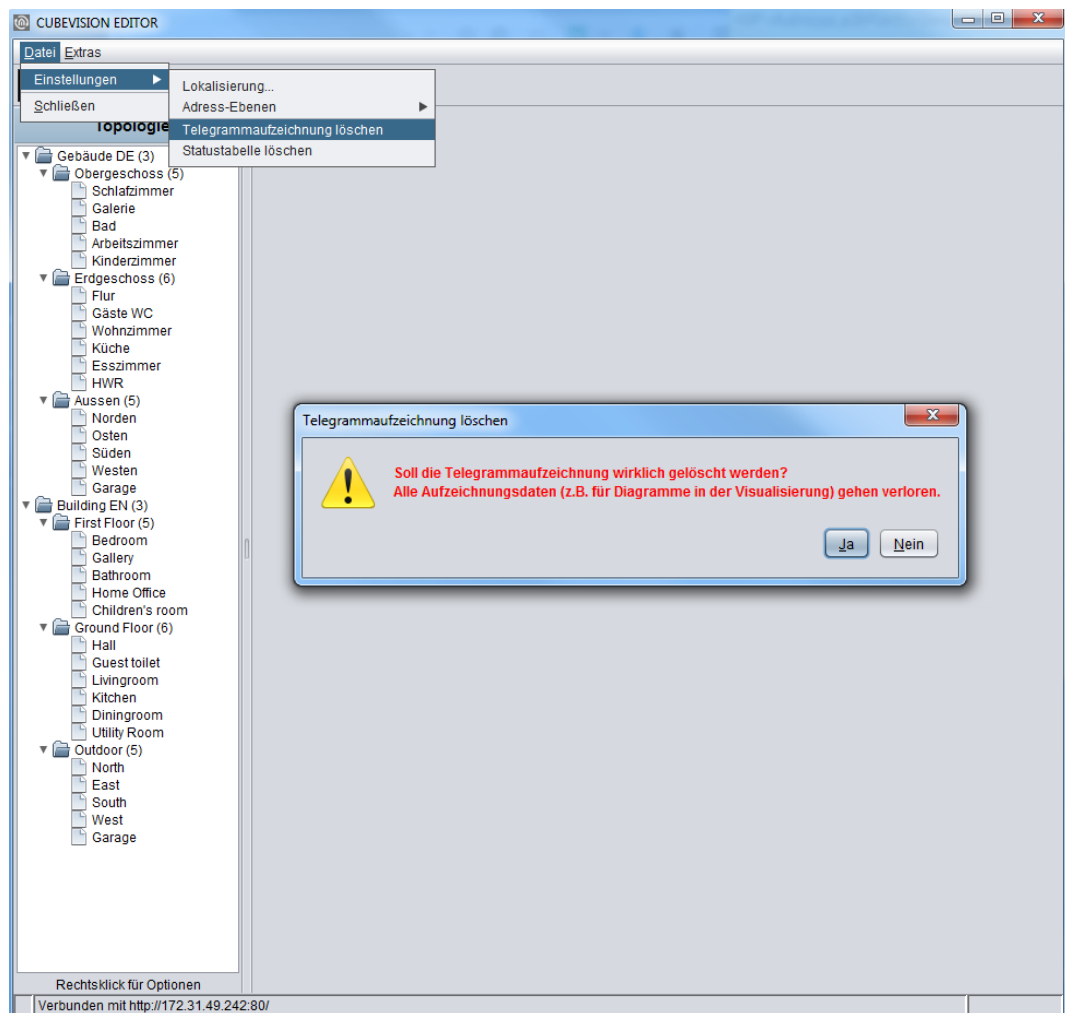
Figure 52: Erasing history table

Erasing state-table

This table stores the state of all given group addresses. These entries will control working of visualisation and jobs. The last condition is determined with the aid of the telgram`s time signature. The state table can be erased without rebooting.
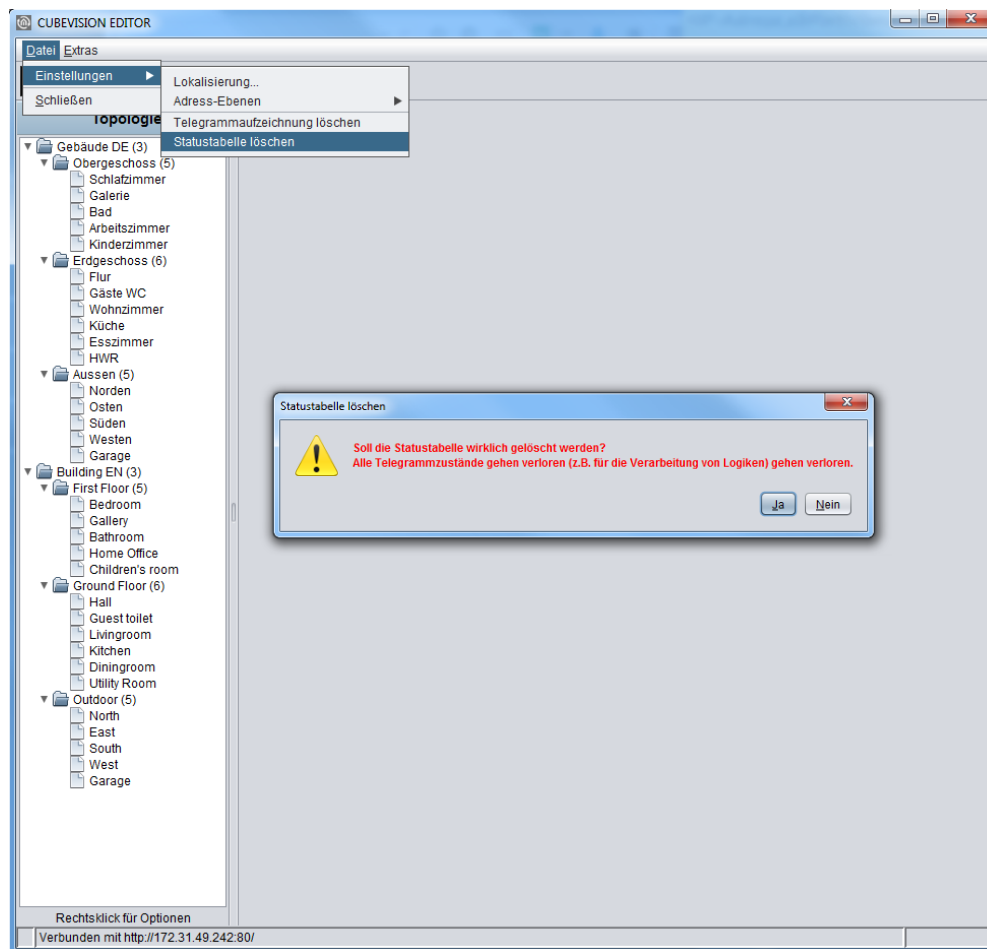
Figure 53: Erasing state table

5.2.2 DAS MENÜ "EXTRAS"

ESF Upload & data maintenance

All group addresses and your EIS typecast with their identifiers are stored in ESF-file. This file will be generated in ETS 3.0 over File > data exchange > export to OPC-server. Data of ESF-file match the kind of project, which is created in ETS. Loaded up to **CUBEVISION**MODULE, this file offers the convenience, that the placing and the clearness of group addresses will be simplified.
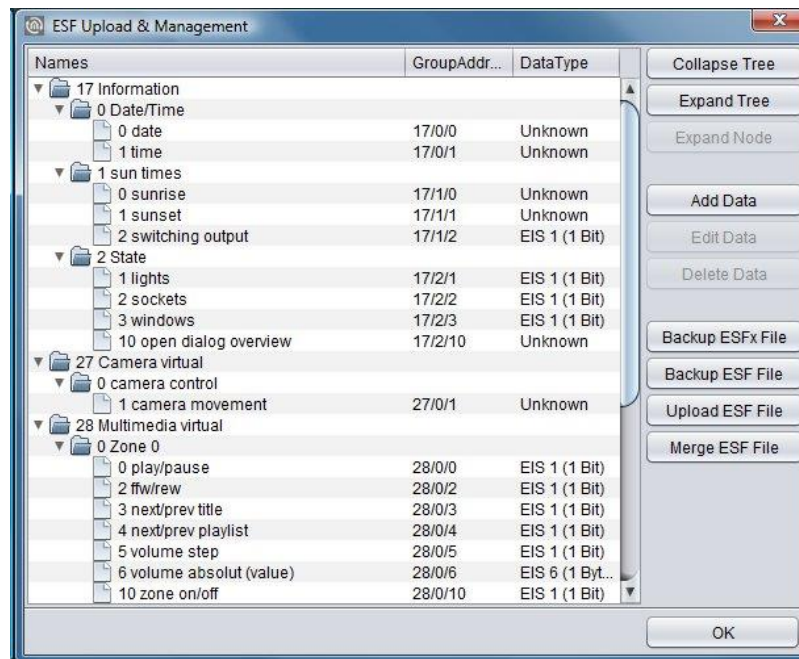
Figure 54: ESF Upload & Data maintenance

For the virtual group addresses or for changings on the existing address data the dialog offers the possibility to maintain the address file. You are able to enter addresses and identifiers.

Please note: If you have made alterations in ESF data of EIBPORT already and if you are uploading this new data from ETS, your modifications will be overwritten by new data.

Collapse tree / Expand tree:
A tree outlines the complete address space of the ESF-file. In case the tree is collapsed, only main groups are displayed, otherwise (expand tree) all groups and their addresses are shown on the screen. Opening and closing of data entries inside the tree works by key click on considered arrow symbols.

Expand node:
The address space of one maingroup is called node. Opening one node, you can have a look at a certain part of the tree.

Add data:
This function allows filling in new, not yet existing addresses. You can enter address as well as the identifier.

Edit data:
In a marked address, you can edit the name, but you can`t edit the address.

Erase data:
Selected group address will be deleted from the ESF-file

Backup ESFx file:
This item runs a backup from **CUBEVISION**MODULE as a ESFx file (xml type), to a free chosen directory.

ESF file backup
The file will be as original ESF file saved as well as the ETS generated.

Caution: As with the original ETS export any data type links to go out EIS1 lost!

Upload ESF-file:
This butoon opens the file explorer to select the desired ESF-file. Click on item "Upload" will start uploading at once, without further confirmation.

ESF file inputting
Opens an additional menu that allows a new or second ESF file can be merged into the present. An existing ESF file can thus be easily expanded with a more recent case have subsequently result in changes to the ETS project.
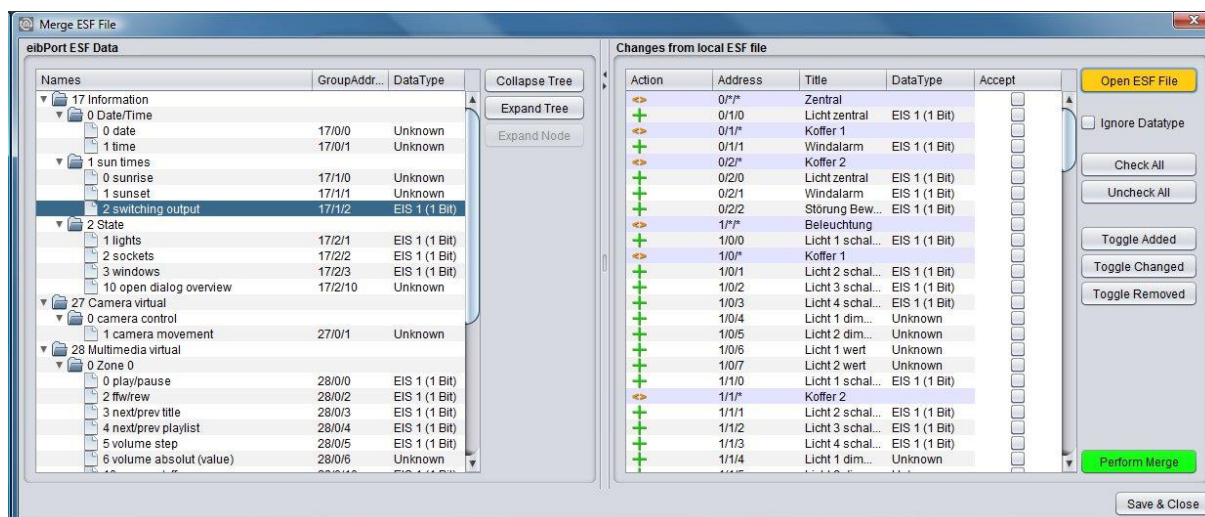
Figure 55: Maintaining ESF data

The "ESF inputting data" is divided into two halves. In the left half of the existing ESF file is displayed. In the right half of the change (not file a second ESF) which would result in merging the two files are displayed. To identify which operation is performed with which group address, the data in the column "Action" will be marked with a symbol. A "+" symbol indicates that the corresponding address of the existing ESF file is added. A "¬" means the address of the existing file will NOT be added, and the "<>" marks the addresses by the new data will be overwritten. After all necessary steps have been made, the window must be on the button "Save & Close" closed. In addition, the following switches:

- ESF Open File: This button opens a file browser with the ESF, the desired file is selected with the extensions
- Ignore Data Type: If this box is checked the data types are ignored during the merge.
- Select All: There are all those actions' in the local file with the hook marked "Accept.".
- Remove selection: The current selection is removed, all the hooks are removed in "acceptance".
- Select New: There are selecting only the addresses (or actions) is added to the new addresses.
- Select Changes: There will be selected all the addresses (or actions) in the existing addresses replaced by new ones.
- Select Deleted: There are all selected addresses

Image transfer

This dialogue stores and manages images for visualisation in **CUBEVISION**MODULE. The images could be sorted to various categories or be deleted.
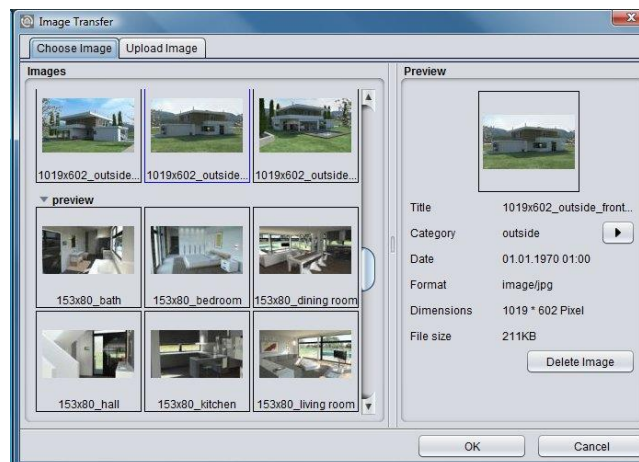
Figure 56: Editor - Image transfer

- Choose Image: In this tab, all uploaded images are managed. If you mark a picture, a „Preview" is shown in the right window. With the help of item "category", you can refer the image to a existing or a new category. Categories and refered pictures appear in the left-hand window. Button „Delete Image" erases the marked picture out of category.
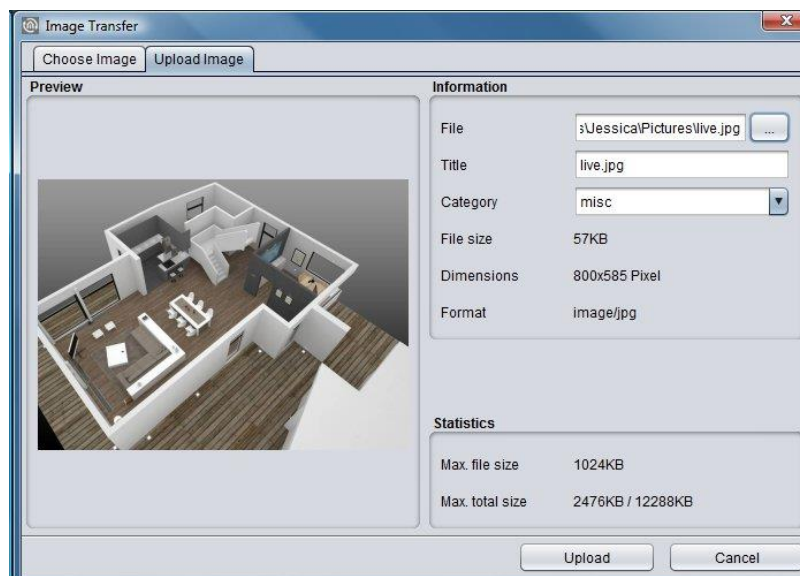
Figure 57: Editor - Image transfer

- Upload Image: This tab makes possible to upload new images. Along with it, you choose a picture, which you can see right in window and then you enter a title to this image. With the help of „category", you refer a category. Image information appears directly after selection on the screen.
In the area „statistics", maximal permitted data size and actual used data space of your image are shown. Key click on „Upload" starts storaging images directly.
Images could also be uploaded by using „drag & drop". Pull the desired image e.g. from desktop to visualisation surface and the dialogue „Upload" opens automatically then.

History & state-table

The **CUBEVISION**MODULE beneath the SQLite database (500,000 frames) stores a record of the last 20,000 messages (storage ring) and provides a state table that always displays the current status of all group addresses.

A state does not exist, when the address never was used. The actual state is defined by the moment of telegram is being received. Using a backup, state table and the history table are saved as well.
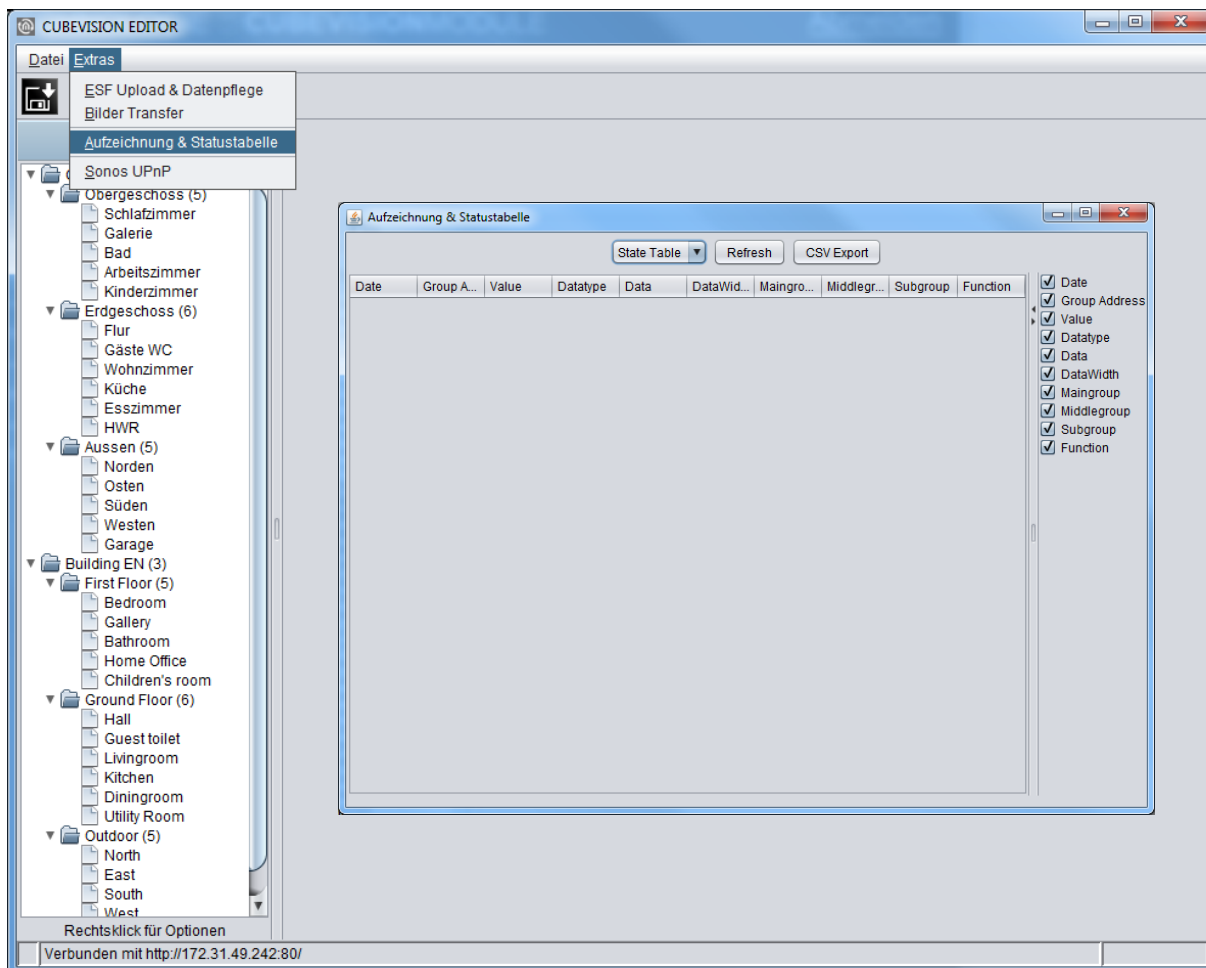
Figure 58: History & state table

- *Refresh:* You can choose between state table and history table. The „Refresh" Button loads up actual table onto the screen. This may take a while.
- *Presentation:* Data will be sorted by date. On the right side you can choose by the help of little checkmarks, which data fields should be shown. At the dividing line of the two parts you are able to hide the one or the other information by clicking the little arrows.

Sonos UPnP

In order to be able to control the available SONOS players using the CUBEVISION "Multimedia" control element, it is necessary to assign the respective players the required radio stations. To do this, switch to the "Sonos UPnP" menu in the "Extras" menu.
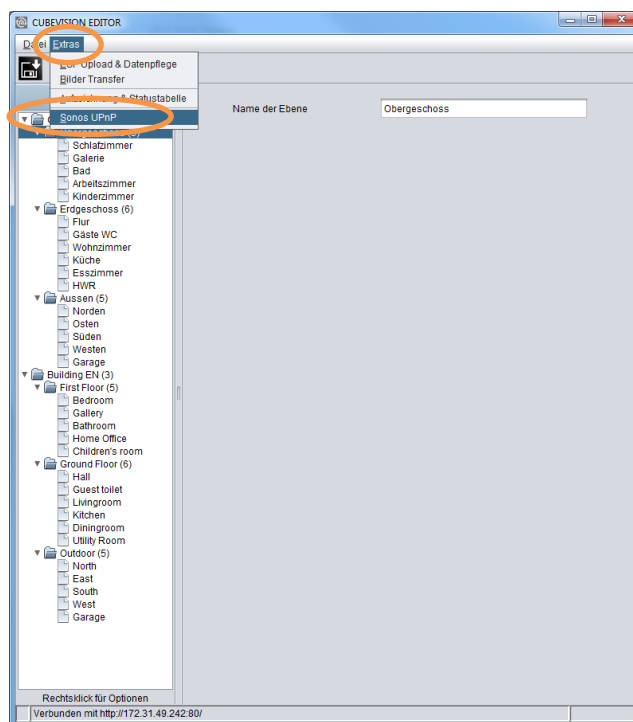
Figure 59: Starting the Sonos UPnP configuration

Now a new browser window with the UPnP configuration opens up.

In order to ensure that the required radio stations can be played via the CUBEVISION "Multimedia" control element, the available SONOS devices must first be assigned the required stations. To do this, please proceed as described below:

1. Open the SONOS App on the smartphone, tablet or PC.
2. Select the required player in the SONOS APP.
3. Search for the required radio station.
4. Select the same SONOS device in the configuration mask of the **CUBEVISION**MODULE.
5. Click "Update" (see figure below, orange circle).
6. Now you see the current title and the current URI.
7. Click "Add Current Stream" (see figure below, green circle).
8. Finally, click "Save" (see figure below, red circle)
9. Repeat these steps until all of your SONOS players have been assigned the required radio stations.
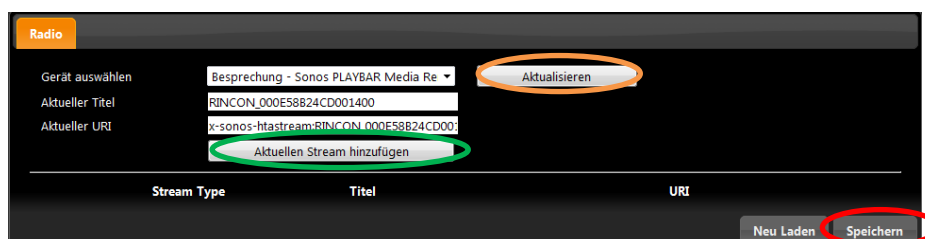
Figure 60: Sonos UPnP configuration

5.3   CUBEVISION KONFIGURIEREN

Die CUBEVISION Visualisierung wird im Hauptfenster des CUBEVISION Editor konfiguriert.
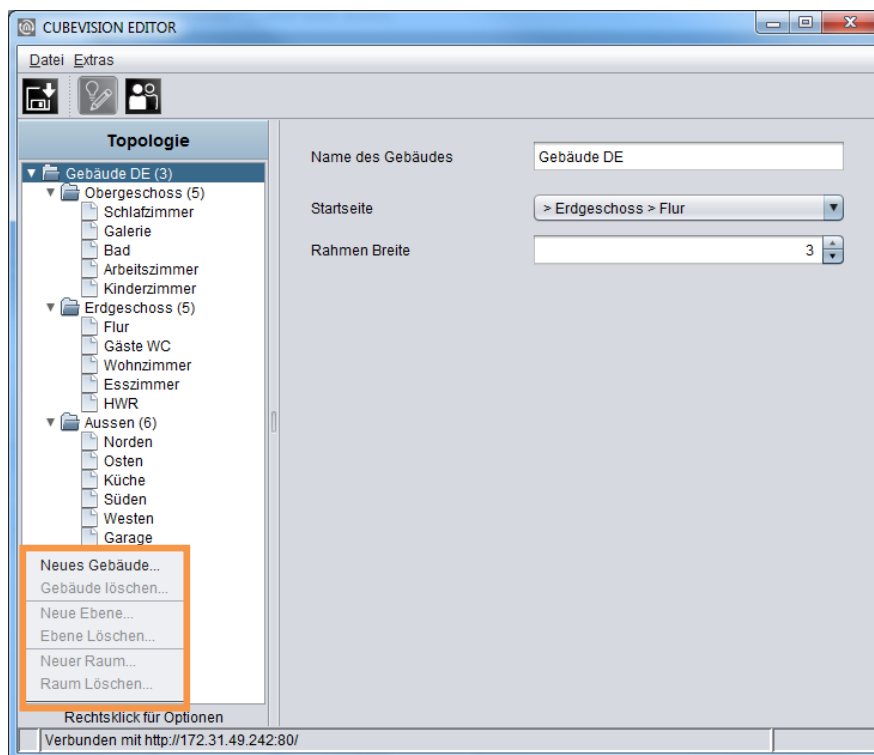
Figure 61: CUBEVISION Editor

CubeVision Editor is divided in two areas . The left side shows the topology of the building. The topology is similar to a directory structure, as you can see in figure above.

As „building", we describe a complete structure, which consists of floors (levels), rooms and elements. This structure will be described in form of a directory tree. This means that a directory depicts a level and a file presents a room. The elements (like switch, dimmer, jalousie, RTR, …) will be added to the room in the form of a list.

The right half is reserved for configuration. That can be the configuration of a building, of a level, of a room and of operating elements. To call up respective configuration of these components, it would be enough to select them simply. Depending on selected component, in configuration window corresponding options will be displayed.

A little bit about topology of the buildings (see figure 13). The first directory represents a building; it stands for the "root directory" of the building structure. In other words: "here is the beginning of the building". One directory level lower, below of the buildings, the building levels are be placed. They present the floors of a building. Below the last directory level, the rooms can be found.

In figure above, the topology of a complete building is laid out already. The name of the first directory "home cube" represents the building`s name and this name will be displayed for selection in the pull down menu of the visualization editor. Three levels exist in the building. They carry the names "Upper Floor", "Ground Floor" and "Outdoor". At the end, below the levels, the rooms will be listed.

Buildings, level and rooms will be added or erased by a popup menu in the topology window. The popup menu can be opened by a right click. In figure above, an orange box encircles the popup menu.

5.3.1   BUILDING

By popup menu „Insert a building.., a new building will be created. An input window appears, in which the building`s name can be entered. Later on, this name will be displayed into a list in the selection dialogue of visualization editor in the CUBEVISION.
After appending the building, the right side of the configuration window shows corresponding options, as shown in figure below. These are:

> The building`s name, which already has been entered before in "Insert a building". This name can be altered in this field afterwards.

> Front page. This option confirms, which window will be displayed, when CubeVision starts. In the pull down menu, the entries will be shown in double figures. The rooms will be displayed after following scheme: > [level] > [room].
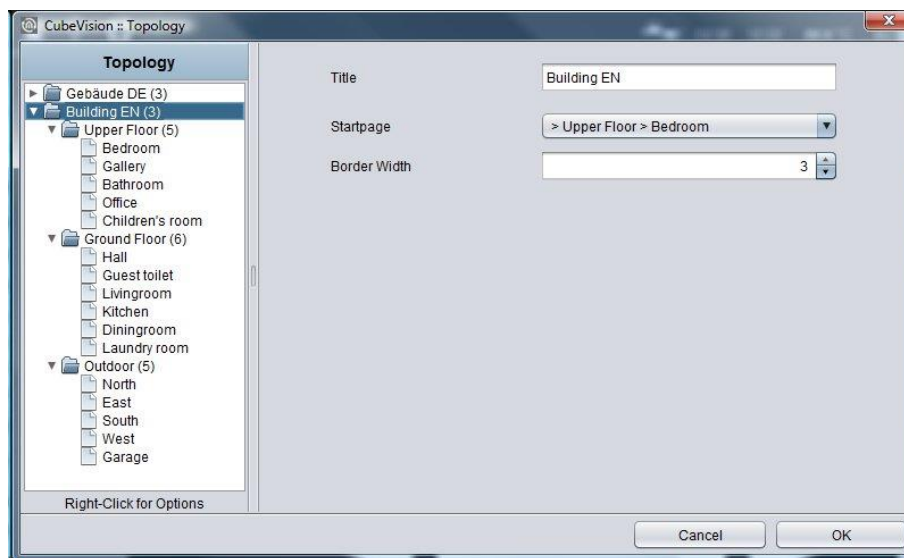
Figure 62: configuration window for buildings

In case that the building will not be required anymore, it can be eliminated by the popup menu`s function „Delete building". A right click has to be executed on the entry of the building, which should be erased.

5.3.2 LEVEL

For appending levels to buildings, you have to use also the pop-up menu with its function „Append levels"
The pop-up menu has to be opened over the building, to add a level to this building. Like the procedure in creating a new building, a window will open here, in which the name of the level has to be entered.
If the level is appended, the right side of the configuration window shows the attendant options (figure 15)
The level`s name. The name of the level was entered already by the creating of the level. But it can be altered in this field afterwards.
The Name of levels will be used in *Quick Navigation*. Every line of pictures in this view will be indicated with these names (see also figure 6).
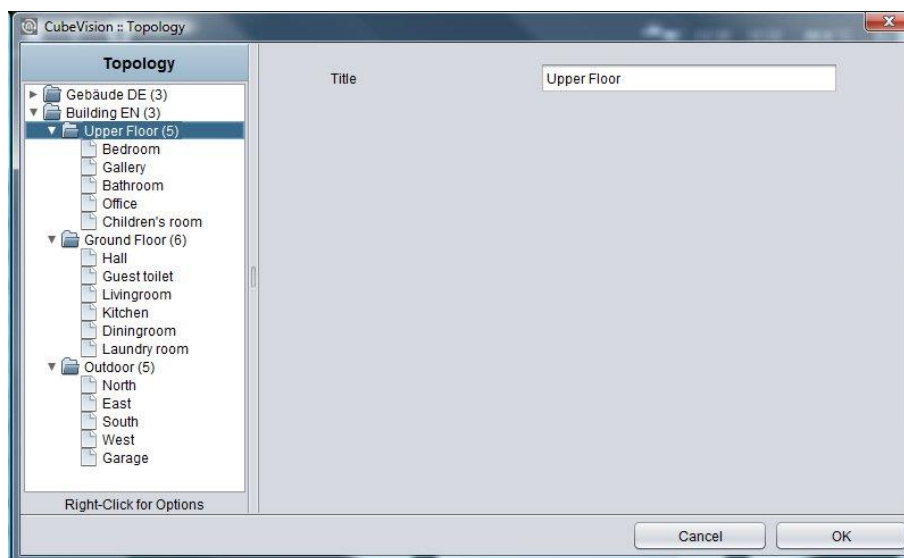
Figure 63: configuration window for levels

If a level should be erased, this will happen by the pop-up menu`s function „Delete a level". A right click has to be executed on the level`s entry, which should be deleted.

5.3.3   ROOM

By the same procedure as in buildings and levels, rooms will be added. An input window opens with the function "append a room", in which the room`s name has to be filled in. The configuration window at the right side displays respective options. Possible options and configurations are the following (see figure below):

- The room`s name. The name of a room was entered by its creating already, but in this field it can be changed afterwards.
- The name of levels will be used also in Quick Navigation and in ICP. Every picture (background image), which was assigned to the room, will be indicated with these names.
- Background image. To every room a background image will be assigned. It fills out a complete face of the cube. (which illustrates a room) The image can be elected in the pull down menu or by a selection dialogue. This image will also be displayed in Quick Navigation, combined with its name.
- List of operating elements. Below these two fields, a list of operating elements is situated. Three switches belong to this list.
  - Minimize all. Folding in all operating elements, which are located in the list.
  - Maximize all. Folding out all operating elements of the list.
    Operating elements can be fold out or fold in, for getting a better overview or for controlling all group addresses. The elements could also be fold out or fold in separately.
  - Append. If an operating element will be appended, a dialogue with a list of 13 different operating elements opens and at the same time, a text field for the identifier, too. The configuration of operating elements is described detailed in chapter 5.3.4.
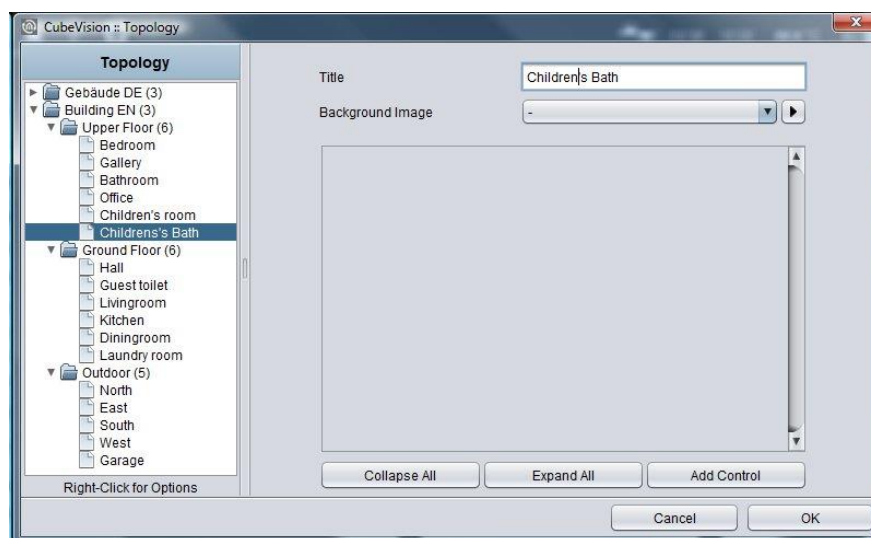
Figure 64: configuration window for rooms

If a room should be erased, this will happen by the pop-up menu`s function „Delete a room". The right click has to be executed on the room`s entry, which should be deleted

5.3.4 OPERATING ELEMENTS

If an operating element should be appended, several possibilities are still available. So the operating elements can be relocated in list or be deleted. Also it will be convenient for proofing the sequence of the elements, to blank out the configuration of operating elements. In this case, only the headline with name und control element will be shown.
Figure 17 exposes the operating elements of the child`s room.
Header operating element. All operating elements are folded in, so that you can only see the header of this element. On the left side, the name of operation element will be shown. On the right side, three buttons are located. Two of them will move this operating element up and down in the list. The third button will delete this element
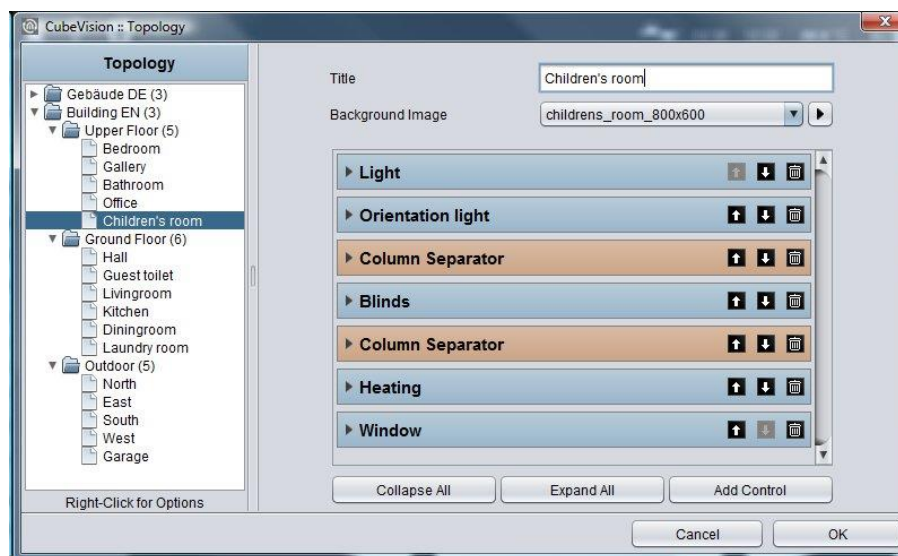
Figure 65: Operating elements

5.3.5 BACKGROUND IMAGE

The recommended resolution for the background image of the room depends on the size of the terminal device on which the visualisation is to be displayed.

In general, the resolutions should be higher for larger terminal devices (PCs, 21" Touch Panel PC) than for small terminal devices (smartphone or tablet).

If all of the background images are of very high resolution, there are no problems for large screens; however, the waiting time might be slightly higher for small devices.

5.3.6 ROOM ICON

The "Room Icon" selection determines the symbol that is presented in front of the name of the room in the room navigation in the CUBEVISION phone presentation. A certain number of symbols has already been loaded onto each device.

5.4 USER ADMINISTRATION

The access to the visualisation is managed in the security settings.

Note: Please protect your visualisation with a strong and secure password if it is available via the Internet.

Switching to security settings

The security settings are opened using the corresponding button in the menu bar of the CUBEVISION Editor. In this menu, it is possible to switch between the "Visualisation" and "Security Settings" menu items. Only the button that is selected in the view is marked at one time.

Figure 66: Opening the security settings

Settings

The user administration can be activated and deactivated. If the user administration has been deactivated, no user login is carried out.

- With both "User Administration" and "Displaying User List in Login Dialog" deactivated, you can immediately access the projects (buildings).

- With "User Administration" activated and "Displaying User List in Login Dialog" deactivated, the user must be entered.

- With both "User Administration" and "Displaying User List in Login Dialog" activated, you can select the user from a user list and only have to enter the password.

Adding / deleting users

A new user is created via the corresponding symbol. As a first step, you must assign a unique name. This name is automatically taken over in the field "User Title" and

"Username". As a second step, a password must be entered. In order to delete a user, you must first mark the respective user in the user overview.

Figure 67: Adding / deleting users

Note: The user is irrevocably deleted without any safety warning.
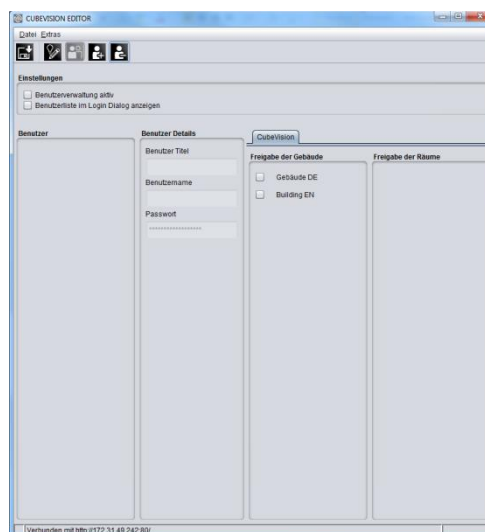
Figure 68: Managing the user administration

AUTHORISATIONS

Each user can individually be assigned the access rights to the projects (buildings) and visualisation pages (rooms).

Granting access to buildings
Here, the projects (buildings) are shown. If a building is activated via the check box, the respective user is granted access to all rooms (visualisation pages) of the building.
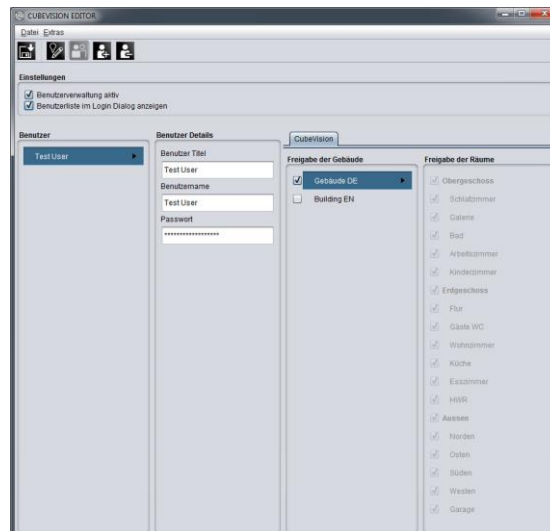
Figure 69: Security settings - Granting access to buildings

Granting access to rooms
Here, access to individual rooms or layers for the respective user can be granted. To do this, the check box in "Granting access to buildings" must not be set. It is thus possible to make your own authorisation settings in "Granting access to rooms" for each room and layer via a check box.
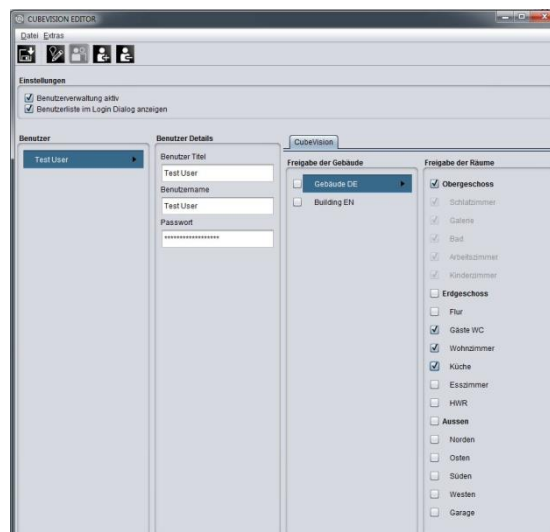
Figure 70: Security settings - Granting access to rooms

Saving the settings

The security settings are saved with the CUBEVISION configuration data using the "Save" button in the CUBEVISION Editor (see chapter "Saving the configuration").

5.5 SAVING THE CONFIGURATION

A little tip: After the visualisation project (building) has been created, it is sufficient to save the change by clicking the "Save" symbol (see figure below, orange circle). The changes are thus written into the **CUBEVISION**MODULE! While working with CUBEVISION Editor, it is recommended to open a browser with the visualisation in parallel in order to check and control the view of the visualisation. If a new room, layer or control element is added, the changes are confirmed by clicking "Save". In the web browser, simply press the"F5" (updating) key once in order to make the change visible.
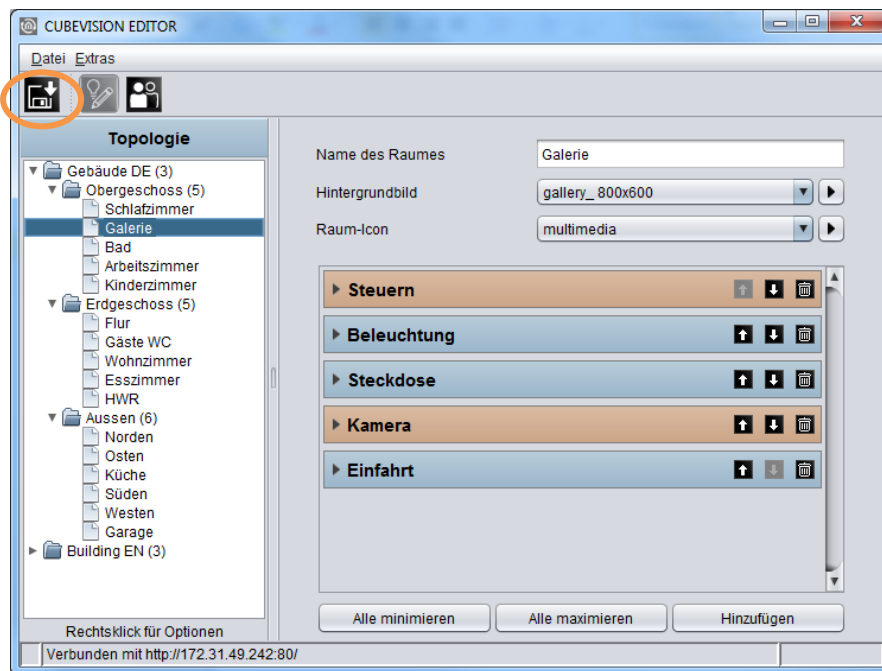
Figure 71: Saving in the CUBEVISION Editor

6   CUBEVISION CONTROL ELEMENTS

For CUBEVISION, 13 completely new (control) elements with new functions were created. The size of these control elements is stated in height units, because elements will be placed in always equal broad columns. In the tablet presentation ([ICP], [ECP]) these columns always have a height of eight (8) height units. In the "Phone" presentation view, the columns can have any height. These columns are always 8 height units high. CubeVision elements have a height between 1 and 8 height units. Beside this "column-view", some elements own a second "expanded-View". In this view, more functions and information will be displayed. "Expanded View" occupies always a complete page.
„Column–view" will be shown in ICP and ECP and „expanded-view" in EEV. These shortcuts have been explained in chapter 5.

6.1   STANDARD OPTIONS FOR ALL CONTROL ELEMENTS

Following three options exist equally in all 13 elements und will be treated at this place. Here the options:

- **Labelling.** This name will be displayed in the title bar of the element (CubeVision).
- **Favourite setting. By this menu item it is defined, whether this element will be quoted in ICP as a favourite or if it will be displayed at all.**
    - *Automatically.*
      Adding this element in favourite setting. This means, that CubeVision defines itself the position of one element in ICP (favourite ranking) and if necessary modifies its position. The more often the element will be used, the higher it will be placed in list.
      Never showing as a favourite.
      By this selection element will not be displayed in ICP, but also only in ECP.
    - *Always showing as a favourite.*
      This choice causes the deactivation of favourite ranking for this element and that the position could be defined manually. The element always will be displayed in ICP.
- **Favourite-Ranking**
  This option only will be enabled, if favourite setting „always showing as a favourite" is selected. The option offers the choice to select which strong position the element will take place in ICP. A position value from 1 to 8 can be assigned
- **Can be operated**
  This parameter defines, whether the element can be operated or if it should only serve as an indicating element. In this case, this element sends out no telegram, but it will receive telegrams only.

Please note: Favourite list is 8 height units high at a max. Depending on the space, which every single element needs, not always 8 elements will fit in ICP (according to the element, 1 to 8 height units will be necessary).

6.2   CONTROL ELEMENTS

Following the configuration and the function of all 13 control elements are explained. Here the list:

Column break
- Switch/Dimmer
- Button
- Temperature/RTR
- Jalousie
- Window contact
- RGB controlling
- Camera
- Multimedia
- Weather (local KNX)
- Weather (Internet)
- Values / Diagrams
- Group switches / Scenes

6.2.1 COLUMN BREAK

CUBEVISION control elements automatically will be inserted in ECP by the editor. So above all, the user only has a bearing on the sequence of elements.

By the help of column break, the user has the possibility to interfere additionally in the distribution of elements in the single column in ECP.

This element possesses no configuration and cannot be seen in visualization.

In following example (figure on the right), a column break element was set between the elements „wall cabinet" and „AV consumer".

Thus the elements „AV consumer", „socket" and „charge station" will be moved in the second place. (Although they would fit the first column)

It also will be possible to insert several columns breaks consecutively for putting elements to the next ECP page.
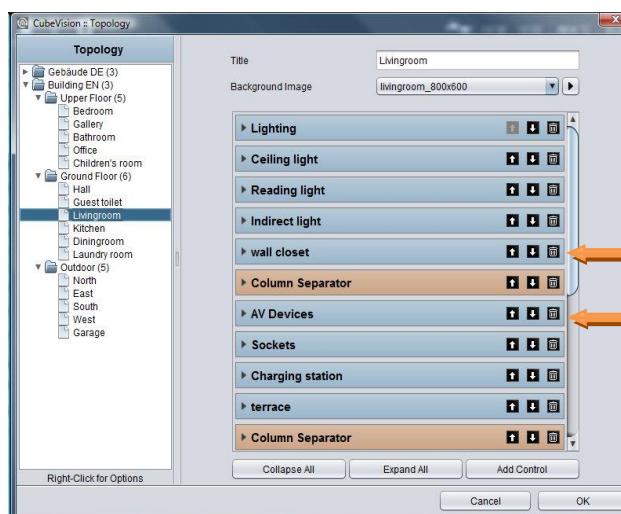
Figure 72: Column element of CubeVision configuration window
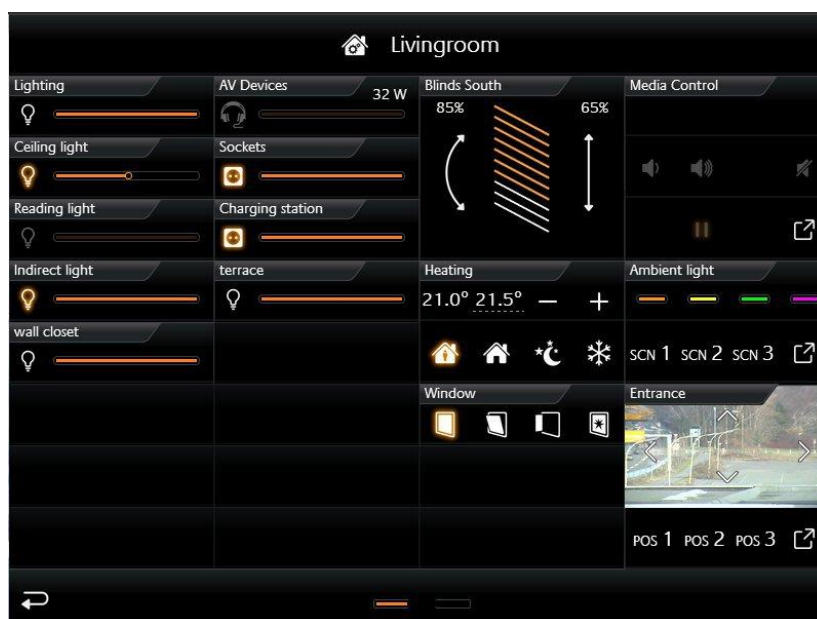
Figure 73: Extended Control Panel [ECP]

6.2.2   SWITCH/DIMMER

- Option: Operability?   Yes
- Extended View: No
- Height units: 1

The control element switch/dimmer disposes of a switch and a dimming function (see figure right). The dimming function offers
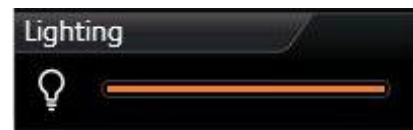
Figure 74: Element Switch/Dimmer

the feature sending telegrams to the bus already by „sliding", to watch the change of lightness for example.

For the control element, 34 different symbols are available for selection. For giving a clear hint to the function, a combination with the symbol and a short identifier exists. Furthermore control element offers a value object (top right in control element), to display additional information. This is useful for example to keep one eye always on the actual dimming value, operating hours or power consumption of this participant.

Following configuration fields this control element possesses (Identifier see figure below**):**

1. **Icons.** These 34 symbols are located on the left side and can display one active or inactive state (see figure 20, left).
2. **Address switching (EIS1).** Therewith the group address is meant, on which the EIS1 telegram will be sent. By activating, the digit "1" and by breaking, the digit "0" will be transmitted.
3. **Feedback switching (EIS1).** To the function "switching", a separate feedback address can be applied. Then the symbol and the bar are showing the registered state.
4. **Address Dimming (EIS6).** The group address of the function "dimming" supports absolute dimming (data type EIS6, value range 0-255). To modify the dimming value, bar (slider) will be used, thereto you can slide on the bar with mouse or finger, from left to right. The left side of the bar represents the dimming value „0" and the right side the value „255". The orange circle indicates a) that it is about a dimmer and b) the position of the slider (actual state of dimming).
5. **Feedback Dimming (EIS6).** This is the separate feedback object for the dimming function. Received state of dimming will be displayed proportionally. In case a group address was specified, value "Address dimming" has no influence to the bar graph (see also TIPPS, item 4).
6. **Dimming Interval (T/s).** Enables periodic sending with up to 4 telegrams per second. This means, while the dimming state is altering, telegrams will be sent just in time. This function can be disabled to reduce the bus load. In this case, dimming level will be sent only then, when the slide will be released.
7. **Value display data type.** For value display, data type of the group address will be selected at this point. For selection are available EIS5, EIS6 and EIS9.
8. **Value display address. The** value of a group address is shown in the value display (see for example figure 20 top right). This example displays the actual dimming value as a value object).
9. **Value display format.** Here the display format will be defined, which includes the unit, the pre- or post-decimal place of the value object (see TIPPS item 6).

TIPPS:
- The control element of a dimmer or a switch can be distinguished by an orange circle in the bar. If a circle is seen there, it is about a dimming control element and if the circle is absent in the bar, it is about a pure switch.
- In a switching control element, the complete area of the control element reacts as a switching button.
- A combined switching and dimming control element will be switched by a short typing on the complete surface. Dimming takes place by moving the circle of the bar, starting with the actual position. A longer hitting to an arbitrary position in the bar causes "jumping" at this dimming value. As long as the bar doesn`t be released, dimming value can be changed.
- If to the feedback objects no group addresses were assigned, so the values of switching and dimming group addresses will be displayed in a feedback state.

- While dimming, the value object will be blinded out and the actual dimming value appears. After dimming, dimming value will be blinded out and the value object comes out again.
- Formatting of the value display. The digit „o" implies a fixed digit and will be displayed always. "#" is one optional digit (as it will usually use as a post-decimal digit) and it will be displayed only if it is necessary. The "." stands for a decimal separator. After that formatting, you still can append the unit.
  For example: 00.0 watt will always be shown with two digits before the decimal separator und one digit after it. The letters "watt" will appear after the displayed value and will serve as the value`s unit.

Figure 75: configuration window of switching/dimming

6.2.3   PUSHBUTTON

- Option: Operability?   Yes
- Extended View: No
- Height digits: 1
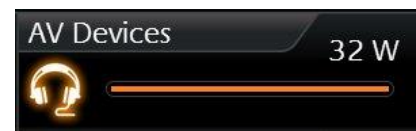
Figure 76: Element pushbutton

This control element is a pure switching control element, without a dimming function. But on the other hand, you can select the function of the pushbutton. At choice there are switch, pushbutton and a value sending function. Telegram values and data types are selectable freely. The options feedback and value object are available for the states "ON", "OFF" and "button free selectable". The options feedback and value object are similarly available, as in the switching and dimming control element. Also for these elements different symbols are selectable, too (here they are 34)

This control element has got following configuration fields (identifier see figure below**).**

1. **Icons.** These 34 symbols are located on the left side and can display one active or inactive state (see figure 20, left).
2. **Data type.** For switching function, data type of the value, which has to be sent, will be selected at this place. At choice there are EIS1 (0,1) and EIS14 (0-255).
3. **Address switching (EIS1 or EIS14).** Group address, on which the switching telegram will be sent.
4. **Feedback switching (EIS1 or EIS14).** A separate feedback, which displays the actual state of the control control element. The symbol and the bar show the confirmed state.
5. **Function.** Hereby it is determined what will happen, if the pushbutton is actuated. Here the options:
   a. **Changing** (Toggeln). Every push of a button changes the state between ON and OFF and will hold it. Only a telegram will be sent. Exception, values can be assigned freely for every state (also not only "0" or "1" are possible).
   b. **Pushbutton**. Actuating this button, two telegrams will be sent. The first telegram by pushing the button (for example ON) and the second by releasing the button (for example OFF). Here also values for ON and OFF can be assigned and inverted freely.
   c. **Value Sender**. A freely selectable value can be chosen, which has to be sent by actuating the pushbutton.

6. **Value „ON"/mouse-pushing and value „OFF"/mouse-releasing.** These two fields define values, which will be sent by ON or OFF. They are freely selectable.
7. **Value display of data type.** For the value display, data type of the value will be displayed and selected here. For selection are available EIS5, EIS6 and EIS9.
8. **Value display of address.** Value of this group address is shown in the value display (see for example figure 22 on the right. This control element displays the actual power). Data type of this group address will be selected in field *value display data type*.
9. **Value display of format.** Defines the display format. In other words, the unit, the pre- and the post- decimal places can be specified.
   Formatting of value display. The digit "o" implies a fixed digit and will be displayed always. "#" is one optional digit (as it will usually use as a post-decimal digit) and it will be displayed only if it is necessary. The "." stands for a decimal separator. After that formatting, you still can append the unit. For example: "00.0 watt" will always be shown with two digits before the decimal separator und one digit after it. The letters "watt" will appear after the displayed value and will serve as the value`s unit.
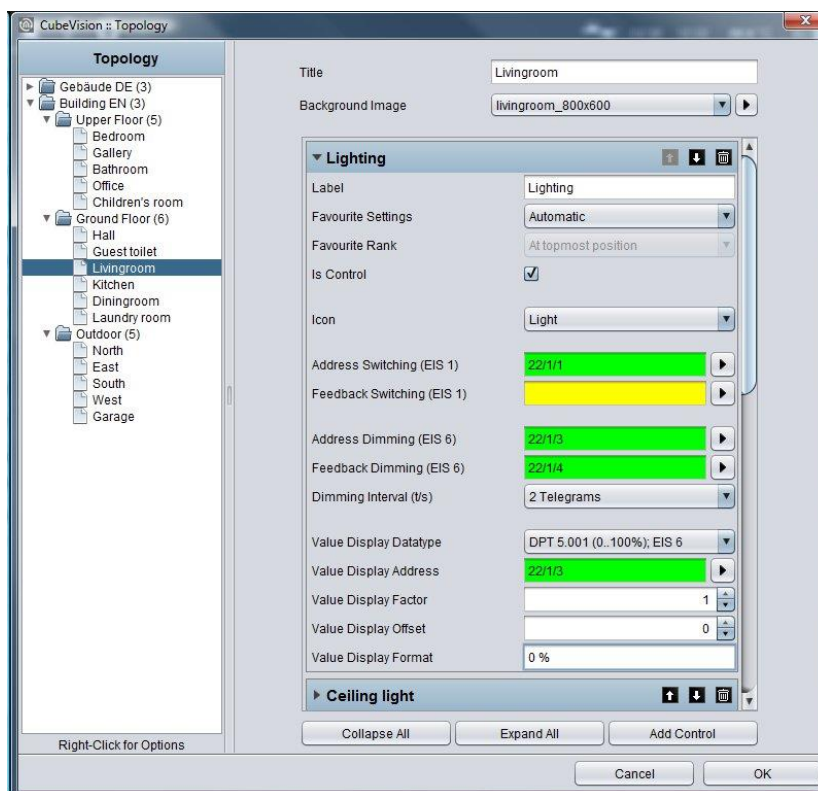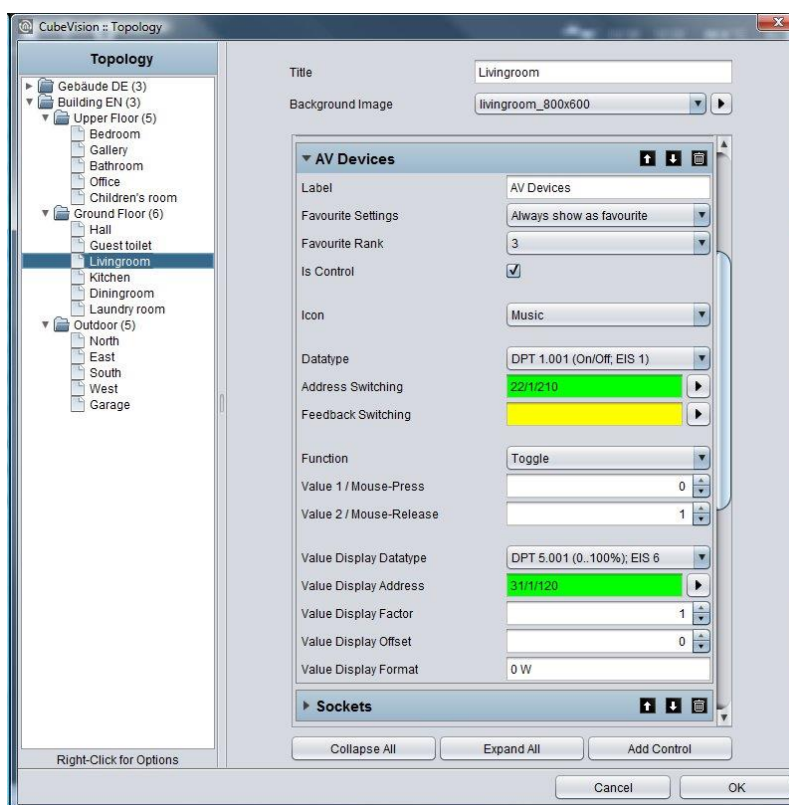
Figure 77: configuration window of pushbutton

6.2.4 TEMPERATURE/RTR

- Option: Operability?   Yes
- Extended view: No
- Height digits: 1 or 2

Temperature/RTR control element undertakes the control of the heating in CubeVision control element. So this control element offers the opportunity to display the actual value of temperature, the operating mode and to set the nominal temperature value or the mode of operation. The two temperature values, which will be shown in the first line (figure 24 and figure 26), display on the left side the actual temperature and on the right side a nominal value.

Nominal value can be adjusted by a PLUS and MINUS symbol. If this control element will be configured as a substation, the base nominal value will be modified by PLUS and MINUS symbols. In addition, the actual temperature value indicates also, if just heating or cooling is working.

Both states differ from each other by colour orange and blue. Blue means cooling and orange signifies heating. If temperature will be displayed in white, neither of both modes is enabled or the display was not configured before.

Figure 78: Element RTR/Temperatur

Figure 80: Element Temperatur

Figure 79: Element RTR

Another feature is the control of operation modes. These are *comfort, standby, night reduction* and *frost protection*. Switching can take place optionally by three group addresses or by one group address with four different values

For this control element three different views are for selection:

- Temperature und RTR display (**Fehler! Verweisquelle konnte nicht gefunden werden.**)
- Temperature Display (**Fehler! Verweisquelle konnte nicht gefunden werden.**) and
- RTR Display (**Fehler! Verweisquelle konnte nicht gefunden werden.**)

This element has got following configuration fields (identifier see figure below**).**

1. **Type.** This choice defines the control element `s view. For selection are *temperature and RTR, only temperature* and *only RTR* (only the symbols of operation modes).
2. **Address of actual temperature (EIS5).** Group address of a temperature sensor for actual temperature.
3. **Address nominal temperature (EIS5).** Group address for the actual temperature. If the control element isn`t configured as a substation, adjusted nominal temperature will be displayed on this group address. In this case, the modified nominal temperature (with PLUS and MINUS) will also be sent on this address. But if the control element is configured as a substation, only the NOMINAL temperature will be shown.
4. **Is a substation.** This function defines, whether the control element will work as a substation. If this function is enabled, the field *base-nominal-value shift* will be activated. By PLUS and MINUS symbols, the *base nominal value shift* will be modified, which afterwards refreshes the *nominal temperature display*.
5. **Base nominal value shift (EIS14s).** This group address modifies the base nominal value. The Value range extends from -128 to +128. If the value has to be changed, RTR calculates the new nominal value and will send it to the address of nominal temperature.
6. **Max. basis set point adjustment (+/-).** This value defines the maximal negative resp. positive basis set point adjustment. In case you fill in here a value of +/-6 for example and the configured step range is 0.5°C, so a possible set point adjustment from up to +/-3°C is the result of.
7. **Address Heating Display (EIS14u).** In order that the actual temperature is able to display the state of heating (value is coloured in orange), the group address of RTR will be filled in here, on which RTR will sent, when RTR switches to the state of heating.

8. **Value heating active (0-255).** At this place, the value will be defined, which will be sent by the group address heating display, if this state was activated. Possible values are 0-255.
9. **Address Cooling Display (EIS14u).** In order that the actual temperature is able to display the state of cooling (value is coloured in blue), the group address of RTR will be filled in here, on which RTR will sent, if RTR switches to this state of cooling.
10. **Value cooling active (0-255).** At this place, the value will be defined, which will be sent by the group address cooling display, if this state was activated. Possible values are 0-255.
11. **Data type operation mode (EIS1 und EIS14u).** Das RTR/Temperature control element offers the possibility to control operation mode in two different ways:
    a. *Over EIS1.* In this setting, the configuration window displays three (EIS1) group addresses, each for **comfort/standby, night reduction and frost protection**. If also a "1" will be received on the group address Comfort/standby, the control element will highlight the symbol *comfort*, in case of a "0", the symbol *standby* will shown as active. Operation modes night reduction and frost protection will be displayed each other as active by receiving a "1".   Only one symbol can be highlighted or displayed as active.
    b. *Over EIS14u.* At this choice, the configuration window displays a field for the group address **address mode input** and in addition four lines, in which the values of the operation modes *comfort, standby, night reduction* and *frost protection* will be defined. The value range of these fields extends from 0 to 255. In figure 27, switching of operation mode by EIS14u is configured. If the user switches to the mode comfort for example, the control element will sent the value "1" to the group address 22/3/3. The other way round, if the control element receives value "2" on the group address, the RTR display will switch to standby.
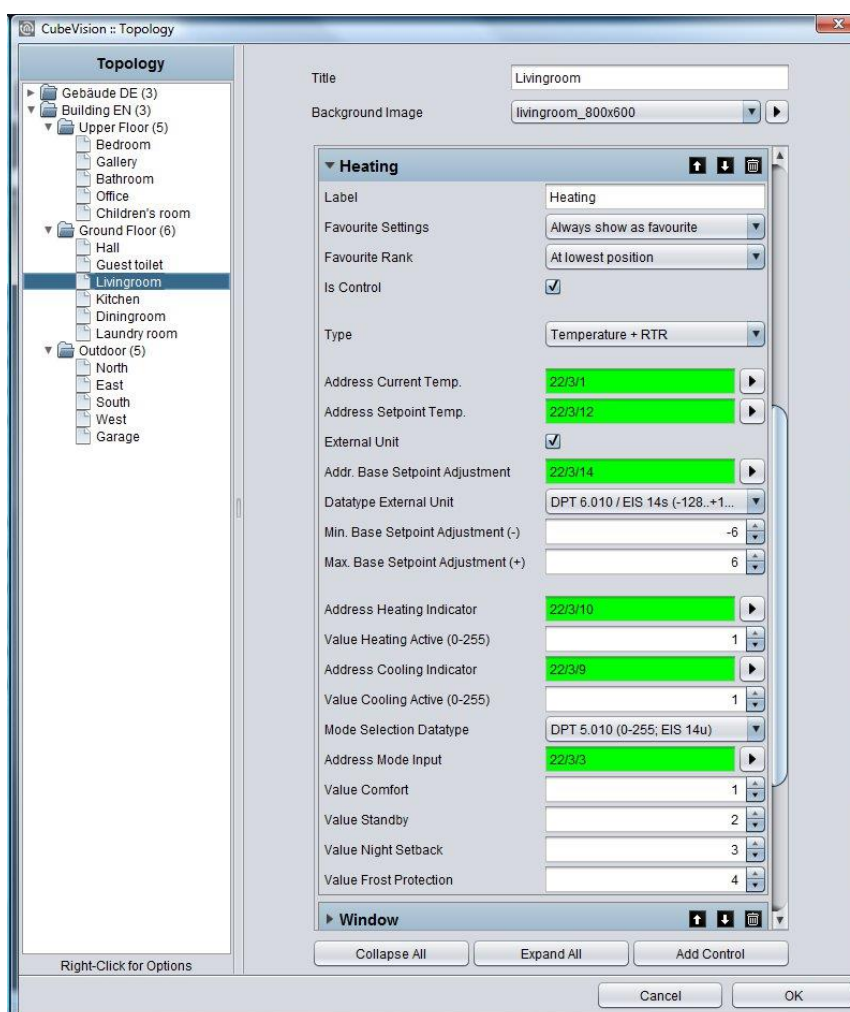
Figure 81: configuration window of RTR/temperature

6.2.5 JALOUSIE

- Option: Operability? Yes
- Extended view: No
- Height units: 3

Shadowing will be controlled by the control element jalousie. The control element shows graphically the vertical position und the angel of the jalousie.

In addition to the graphical display, positions will be shown as values. These values are displayed in percentage terms for position (right value) and angel (left value) of the jalousie. In figure 28 and

29 two types of jalousie control element are illustrated. The control of these control elements takes place in two ways:

- Standard (for push-button; **Fehler! Verweisquelle konnte nicht gefunden werden.**)
- Touch & Slide (for sliding; **Fehler! Verweisquelle konnte nicht gefunden werden.**)

As its name implies, you can use in type „standard" a button and in type „touch & slide" a slider. Figure 28 shows how to control the control element by "touch & slide" and figure 29 displays the controlling of "standard"

In mode „touch & slide", you will simply position your finger on the left side to the angel control or on the right side to the

position of jalousie and then you move the finger in the desired direction. While moving the finger, you get an optical feedback over the angel or the position of the jalousie. If the desired position will be reached, jalousie will approach to it, just as you will release the control element.

Three different modes of shadowing can be controlled:

- Jalousie. Classical jalousie with lamellae, which can be inclined in both directions.
- Roller blind. It can only be moved high and low.
- External blind (venetian blind). Similar to the classical jalousie, but with the different, that the lamellae can be inclined in only in one direction out of its horizontal position.

Depending on selected types of jalousie, element displays only these controls, which are required actually. So it will be displayed no button or no arrow for adjustment of an angel in the element type roller blind. Also this element possesses feedback objects. In this element they are position and angel (which can be enabled or disabled according to the type of shadowing). Also one input for wind alarm is available of course.

Figure 82: Element jalousie touch & slide

Figure 83: Element jalousie standard

This control element has got following configuration fields (identifier see figure below**):**

1. **Display.** This choice defines the type of control unit for the jalousie control element. You can choose between a typical control and an intuitive gesture control (touch and slide). While a typical control displays buttons, the touch & slide control depicts two arrows. The different to the typical control is the fact, that the desired position can be defined as well as by tapping directly or by sliding with the finger from an arbitrary position to the desired position. Furthermore positive is the effect, that the position, which will be approached after releasing, at the same time will be displayed in the control element, also a kind of preview.
2. **Type.** This control element optionally can be predefined to the three different types of jalousie, which were explained detailed in previous chapter.
3. Angel area**.** This feature was implemented to fit the angel area according to the type of jalousie. This is necessary, so that the angel can be displayed correctly in visualization.

Depending on the manufacturer, the angel will be specified in 0-100% from left-hand or right-hand hinge of lamellae. Also the alternative (-100% to +100%) exists, in which the value 0% describes the horizontal lamellae position.

4. **Direction inverting.** For the reason, that the direction of the jalousie will be interpreted differently again and again, movement direction of the jalousie can be defined by this option. With this option can be selected, whether jalousie will be run up by "1" or "0".

5. **Address Move (EIS7).** This group address controls the "raising and lowering" of the blinds.

6. **Address stop/step (EIS7).** This group address sends the order for stop or step.

7. **Address position (EIS6).** One desired position of the jalousie can also be approached directly by an entered value (0-255). If the user touches the middle of the right arrow (touch & slide type) for example, to this group address the value 127 will be sent, and thereby the jalousie automatically moves to this value (position). If in field *feedback position* no group address was entered, jalousie control element uses this value for displaying the position of the control element.

8. **Address feedback position (EIS6).** If in this field a group address is filled in, so the control element doesn`t show the position, which was adjusted by address position, but it will display the actual position, which this group address will receive.

9. **Address feedback angel (EIS6).** If in this field a group address is entered, the control element doesn`t show the angel, which was sent over *address angel*, but the value of the angel, which this group address will receive.

10. **Address wind alarm (EIS1).** In jalousie control element an optical message for wind alarm will be displayed, if this group address will receive value „1". So the jalousie will block and the controlling of the jalousie will not be possible anymore, as far as value "1" is applied to this group address.
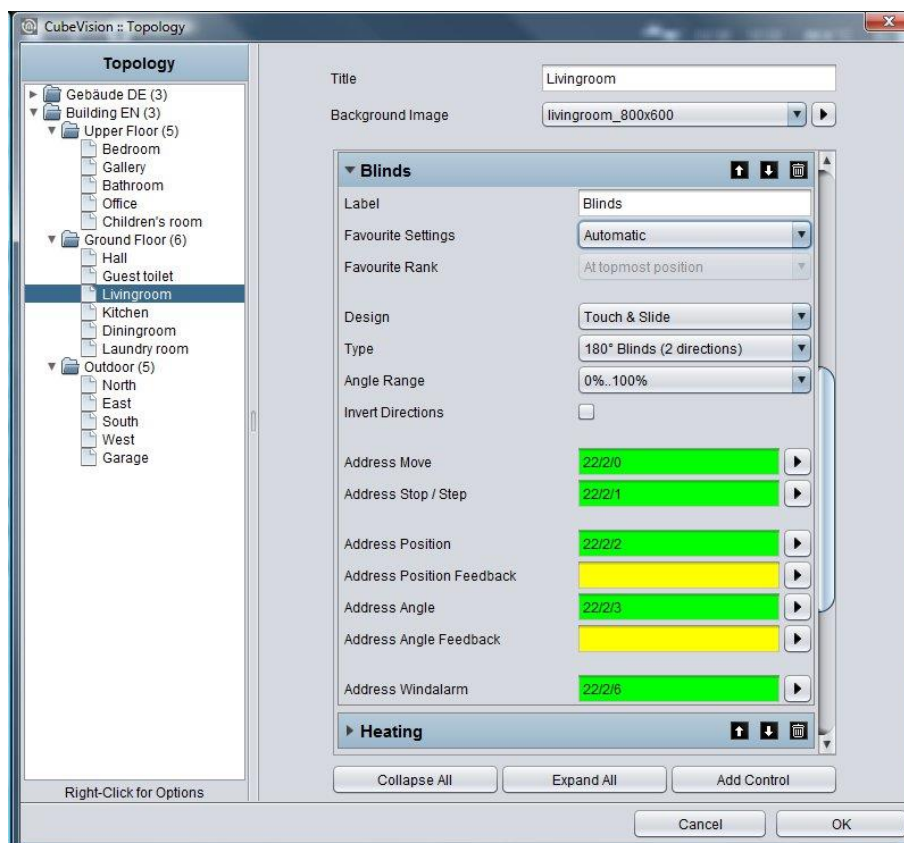
Figure 84: configuration window of jalousie

6.2.6   WINDOW CONTACT

- Option: Operability   No
- Extended view: No
- Height units: 1

Figure 85: Element "window contact"

To illustrate the state of windows, control element window contact is used. It shows following positions resp. states:

- Closed
- Open
- Tilted
- Glass breakage

Every position und the glass breakage have got its own symbol, which can be displayed in the control element. If one position is activated, corresponding symbol will be highlighted in orange. In case no group address was applied for a position or a state, corresponding symbol will not be shown.

The position of the window can be displayed by two different data types. There are data of type EIS14 (0-255) and EIS1 (o or 1). The different between both data types is the number of group addresses. This means, that in data type EIS 1 the position by the group address and in data type EIS14 the position by values have to be defined. Furthermore this control element can announce glass breakage. Independent from the data type, this control element always has its own group address.

This control element has got following configuration fields (identifier see figure below**):**

1. **Data type input.** You can select, which position of the window will be evaluated. The functionality of both types was explained in previous chapter.
2. **Data type EIS14.**
   a. **Address position.** By this one group address, the window position will be received.
   b. **Values closed/tilted/open.** These three values define, when the positions closed, tilted, and open are activated in visualization. These values can be assigned freely.
3. **Data typ1 EIS1.**
   a. **Address tilted.** By this group address the state of the position "tilted" / "closed" will be received. In case of value „1", the symbol of the titled and closed windows with Value "0" will be highlighted.
   b. **„Titled" inverted.** But if the window contact announces position „titled" with the value „0", this option can invert the evaluation.
   c. **Address open.** On this group address, the received value „1" for the position „open" will be shown in visualization.
   d. **„Open" inverted.** Just as in field *titled inverted*, evaluation can be inverted here also.
   By the way: This type has got no group address for the window position "closed". This position will be shown, if the group addresses (open, titled) have got the value "0".

4. **Address glass breakage.** Address of glass breakage**.** If a glass breakage sensor exists, so an optical warning of glass breakage can be displayed by this address. Value „1" signifies glass breakage and '0' stands for no glass damage.
5. **Glass breakage inverting.** Also here, evaluation can be inverted, so that value „0"will be interpreted as a glass breakage.
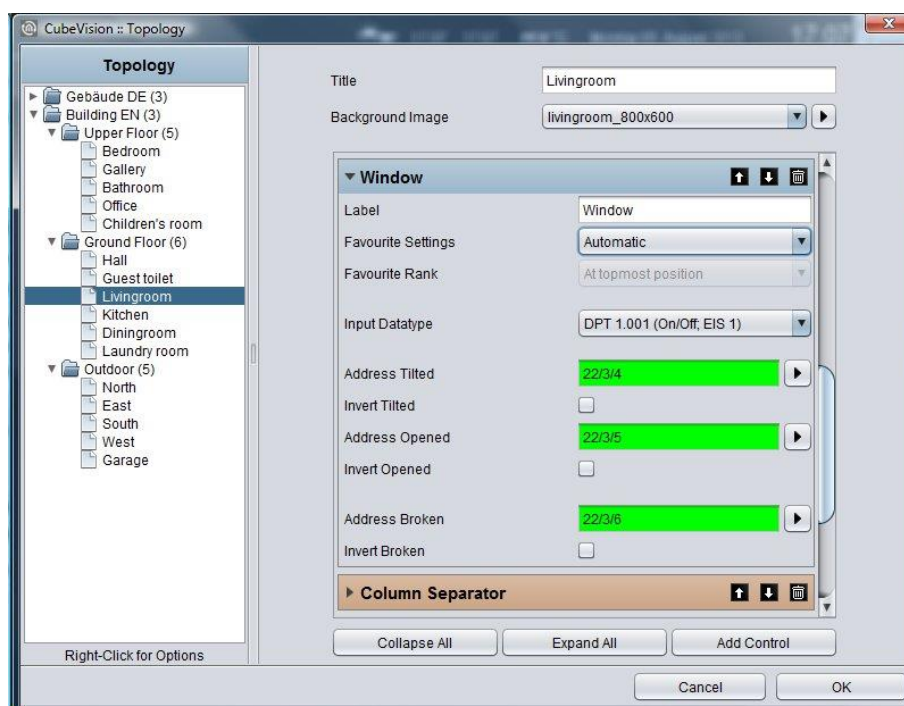
Figure 86: configuration of window contact

6.2.7   RGB CONTROL

- Option: Operability?   No
- Extended View: Yes
- Height units: 2

Of course, a control of RGB lighting must not be absent in CubeVision control element. The control element RGB control undertakes this task. The possibilities are given to call up light scenes and predefined colours and to blend colours over visualization freely.

Figure 87: Element RGB control

This control element has got to views: A compact one with two height units for the *ICP*, resp. for the *ECP* and another one in *EEV*. The compact view shows 4 freely selectable colours at a max in the first line and maximal 3 buttons for scenes in the second line. The second view shows the RGB control element in *EEV* with more possibilities of operation. Beside the choice of colours and light scenes, *EEV* will uses also colour channels (up to four RGBW) and a colour circle. Figure 34 displays the RGB control element in *EEV* view. In the right column, the slider is situated, by which the single DMX channel can be controlled.

By the way, if no group address is entered for the channel "white", this channel will not be displayed in visualization. In the center of this view, the colour circle is located, by which colours are chosen by fingertip. Just below, 2 lines with each 4 buttons of predefined colours and light scenes are situated. In the line of the light scenes, an additional reserved button is located to stop the running light scene.

To send a colour value to a RGB lamp, different methods exist, depending on the lamp`s type. They differ either in having one group address for all colour values or in offering a separate group address for every colour value. Data types:

- 4x1byte values (one object for each R, G, B und W; EIS6; 0-255; for the most applications)
- 1x 4byte value (one object for each R, G, B und W; similar to DTP232.600 plus an extra channel for white)
- 1x 3byte value (one object for R, G und B; DPT 232.600)

In order that, the possibility exists finding out the correct control mode for nearly every RGB lamp type. Configuration of light scenes consists simply in allocation of the group addresses. If the group address for a light scene is absent, so this address will not be displayed in Cube. If one of the light scenes will be released, EIB**PORT** transmits to this group address "1". By a click once more to an active/running light scene, EIB**PORT** sends the value "0" to this group address. In RGB control element, there is a place for 4 light scenes at a max. The lettering of the light scenes are "Scene 1" up to "scene 4" and can`t be modified.

Just right to the light scenes, the button "scene blocking" is located. This button is a light scene as well and will be reserved in case, a scene will not be desired at all and a simple stop of the light scene will not be enough. Therefore a separate light scene can be arranged, which dims down the RGB lamps as long as they are turned off or they have changed to a selected colour.

In addition to the four buttons for the light scenes, another four buttons of the favoured colours exist. For configuration of the colours, it is only necessary to select the desired colour by the colour selection dialogue.

Also there is no handling with colour values needful. CubeVision editor uses this colour out of the colour selection dialogue of visualization. The colour values come from the colour selection dialogue and the group addresses of colour values from the RGB **control element**.

Figure 88: extended element view of RGB control

This control element has got following configuration fields (identifier see figure below**):**

1. **Output type.** Types differ from, if all colour values (red, green, blue and white) will be sent to a single group address or if every colour value should be sent with a separate group address. Thereby it is about a 1 byte data type with a value range of 0-255 resp. 0-100%. The chapter before explains these data types.
   Address channel red, green, blue and white. At data type 4x1byte, configuration mask shows four fields for group addresses. These fields are labelled with the respective channel colour. In case another data type will be used, configuration mask displays accordingly only one field for a group address. These group addresses are used also in the colour circle (in *EEV*) and for the favourite colours.
2. **Scene starting #1 … #4.** Light scenes will be started by this field with value „1" and will be blocked with value „0".
3. **Scene blocking.** Also a scene button, that is reserved for a light scene, which will be activated if a running scene will not be desired anymore or a lighting has to be shut off. This button works exactly as the other scene buttons, but it is only labelled with "scene blocking" in contrast to the others.
4. **Favourite colour #1 … #4.** Opens a colour selection, in which desired colour can be chosen. CubeVision editor cares for colour value, group address und colour fields.
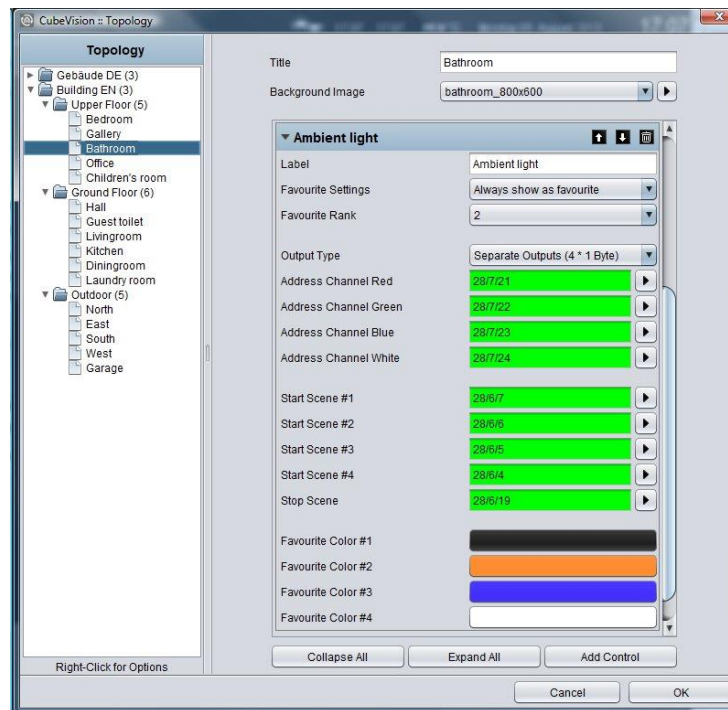
Figure 89: Configuration window of RGB control

RGB CONTROL IN THE PHONE PRESENTATION

The extended element view ([EEV]) of the RGB control has a different structure in the phone presentation of the CUBEVISION due to the optimisation on smaller displays.

EEV view 1
If the control element is opened in the extended element view ([EEV]), only the colour circle and the scene control are displayed at first.
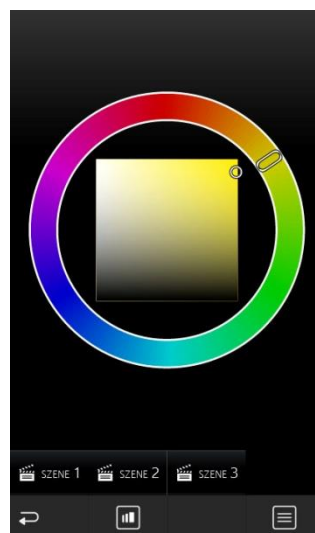
Figure 90: RGB element phone presentation - EEV view 1

EEV view 2

In order to display the individual channel control and the default colour settings instead of the colour circle, it is possible to switch between the different views using the "View" symbol.

Figure 91: view

Figure 92: EGB element phone presentation - EEV view 2

List view

Touching the "List" symbol displays a list with all RGB controls created in the room. In this way, further control element can be accessed without having to navigate through the rooms in a time-consuming manner.
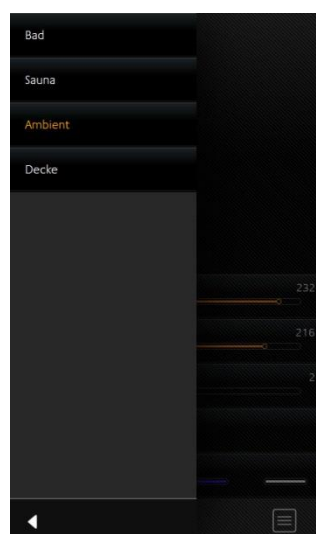
Figure 93: RGB element phone presentation - further elements

6.2.8   CAMERA

- Option: Operability?   No
- Extended view: Yes
- Height units: 3

The camera control element also has got two kinds of views. A small camera view (preview), with a small choice of functions for *ICP* and ECP (see figure 36). EEV displays the second view, in which additional options and functions are situated, beside a larger display of camera view. To the functions of the smaller camera

Figure 94: camera element

view belong Pan, tilt control and three fixed positions, which can be activated. The movements can be controlled directly by the arrow symbols in the camera picture itself. Just below the camera picture, three position buttons are situated, to call up confirmed positions. In the view of EEV however, there is space for a fourth button, for a zoom function and for the possibility, to switch between the formats motion JPEG and static JPEG. (see figure 37).

The configuration will be very simple. Start will be the "base URL", which typically consists of the IP-camera`s address and if necessary, of the http-port. After that, paths to the JPEG camera pictures (motion and static), positions and PTZ orders will be filled in. Here it is about a so called http-request. These will be composed on demand out of the basis URL and the corresponding path.

Example*: In case arrow symbol „left" will be released in visualization, visualization assembles basis URL and path of action „left" to a http-request and transmits it.*

A configuration of http-request control is optional. If paths of functions will be left off, the control element also will not display these in visualization. As a feature, camera control element offers the possibility to display the three different display formats 4:3, 16:9 and 16:10.

Figure 95: extended element view of camera element

This control element has got following configuration fields (identifier see figure below):

1. **Basis URL.** This URL is the basis and it always will be written in front of the paths of PTZ-control or camera picture. As a rule:
   http://<IP-address or DDNS names>:<http-port>
2. **Aspect ratio of picture.** In order that, the aspect ratio of the picture can be adapted to the camera. Formats 4:3, 16:9 and 16:10 can be selected
3. **Path motion JPEG.** In this field a direct path to stream will be filled in. This pattern of display is very fluent in a simultaneous quality, but it also needs more resources.
4. **Path JPEG Image.** Nearly all IP-cameras possess a path to a static picture. It is about the picture, which the camera records in the moment of calling. In case this path will be used for visualization, it attempts to call up the picture several times, so that a motion picture will be created.
5. **Path zoom in/out.** These fields are connected with the plus and minus symbols in the camera view. Paths contain the orders for scaling down and for scaling up the camera picture.
6. **Path movement up/down/left/right.** These fields are connected with the arrow symbols in camera view. The paths contain the orders for the left, right, up and down movement of the camera picture.
7. **Path position #1 bis #4.** Paths for configured and stored positions of the camera.
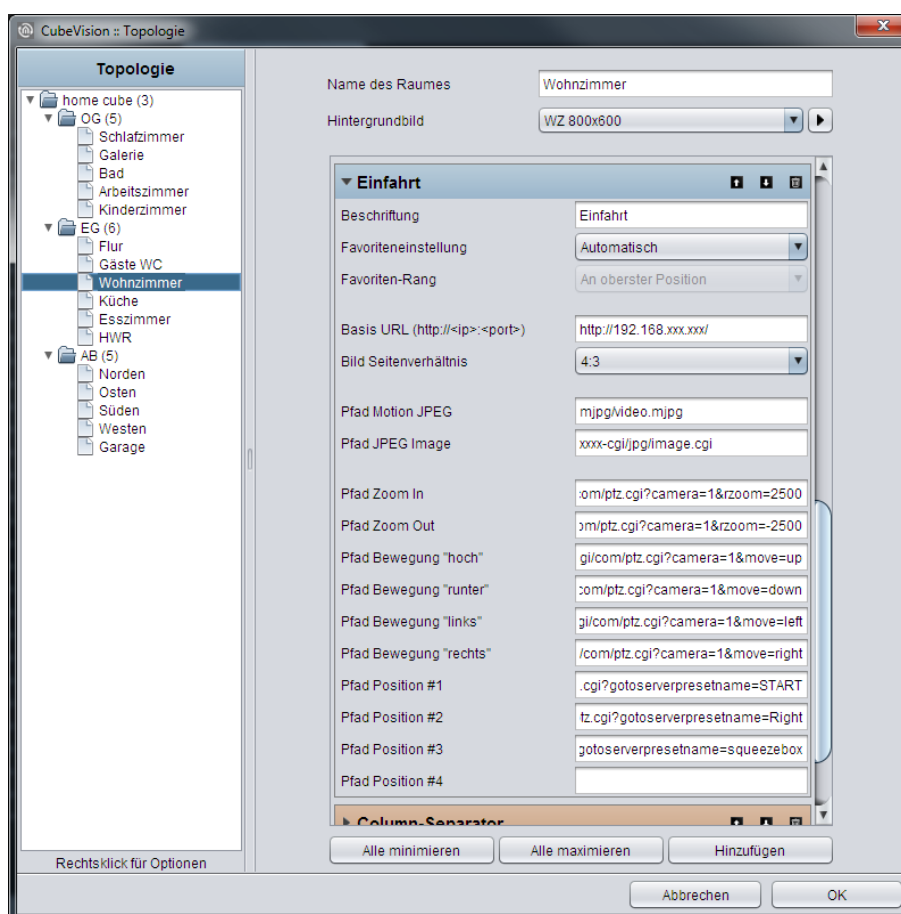
Figure 96: Configuration window of camera

Please note: Path for configuration fields 3 to 7 may not contain basis URL. Basis URL will be completed by CubeVision.

CAMERA

Camera control in the phone presentation
The extended element view ([EEV]) of the camera control has a different structure in the phone presentation of the CUBEVISION due to the optimisation on smaller displays.

EEV (Extended Element View)
The camera control element has a simplified view in the EEV of the phone presentation. It consists of the camera picture including the (optional) control elements and the position keys.
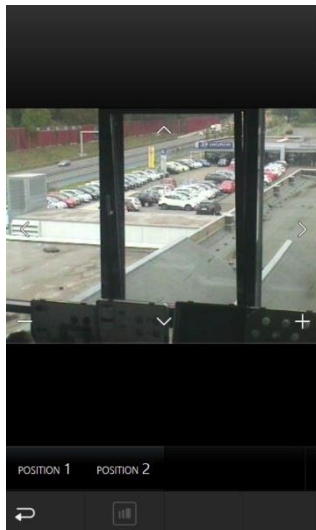
Figure 97: Camera control phone presentation - EEV

6.2.9   MULTIMEDIA

- Option: Operability?   No
- Extended view: Yes
- Height units: 3

As a multimedia client, Squeezebox and Sonos system are provided. That means for configuration, that these multimedia clients will be configured as always in existing editors (job editor resp. UPnP editor, see eibPort manual) and at this place only have to be selected out of a list If the *EEV* is opened for this control element, a cover and a dynamic playlist selection are additionally displayed. The Squeezebox Player, **AUDIO**MODULE ("Squeezebox Controller") and the SONOS System are supported as a multimedia client. As soon as these devices are available in the network, they can be chosen for linkage in the configuration.

Figure 98: Multimedia element

Beside control options, multimedia control element also displays information. To this belong interpreter, album, track and cover (as far as music information are available).
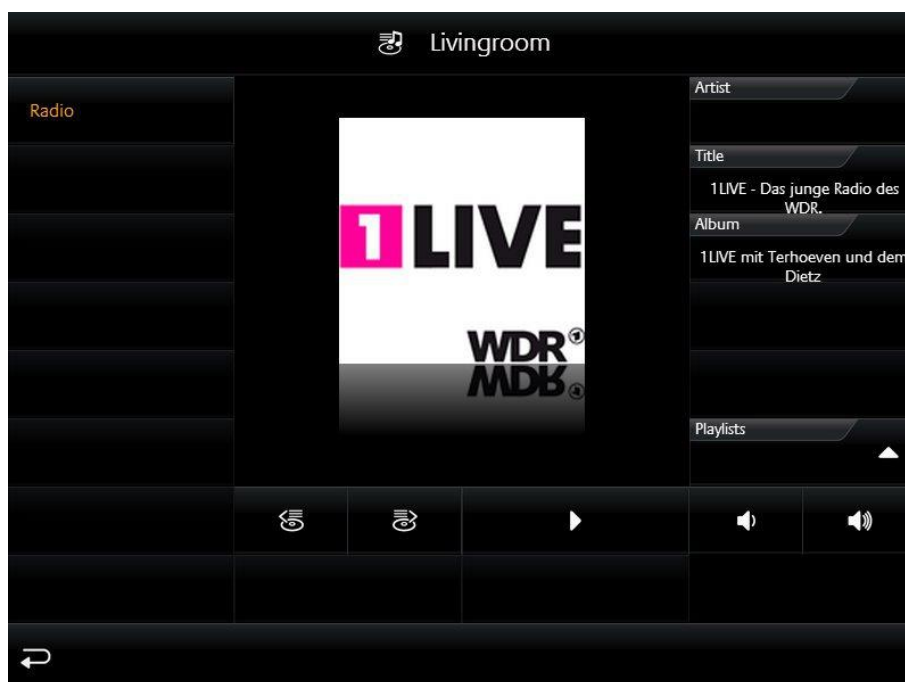
Figure 99: extended element view of multimedia element

This control element has got following configuration fields (identifier see figure below):

System.
What kind of type should be controlled by multimedia. For selection are:

        a)   Manual configuration
        b)   UPnP (Sonos) and
        c)   Squeezebox

MANUAL CONFIGURATION

If this choice is selected for the system, the control element displays a list of group address fields (see figure 43). This precept will be used for controlling different media (RS232, http-request, infrared, group addresses etc.) for example.

    Functions, which can be linked with group addresses:

    a. Play/Pause. EIS1 group address
    b. Playlist forth/back. EIS1 group address
    c. Track forth/back. EIS1 group address
    d. Loudness gradually. EIS1 group address
    e. Silent. EIS1 group address
    f. Info track. EIS15 group address
    g. Info interpreter. EIS15 group address
    h. Info album. EIS15 group address
    i. Cover URL. Path to actual cover
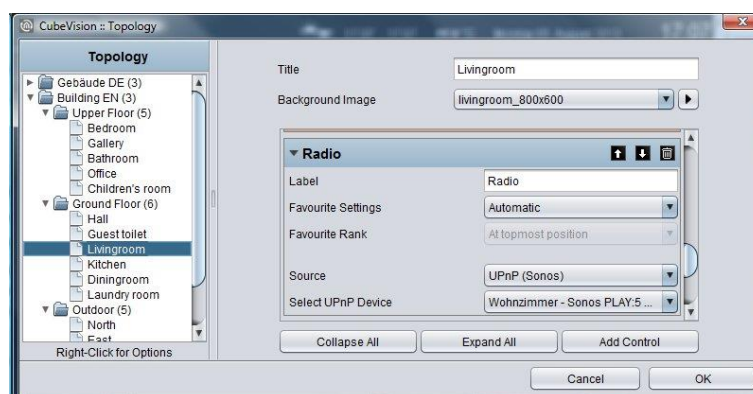
Figure 100: Configuration window of multimedia for Sonos
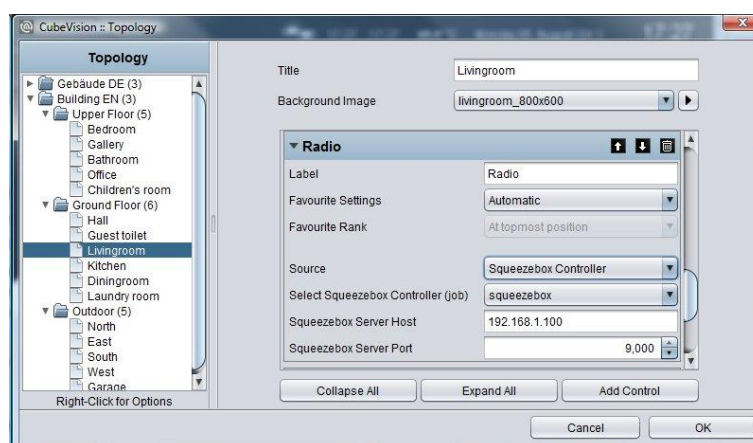
Figure 101: Configuration window for Squeezebox

This control element has the following configuration fields (see figure below**):**

UPNP (SONOS)

If UPnP (Sonos) has been selected as a system, the SONOS radio stations can be controlled using the multimedia control element. In the "System" selection, the "Select UPnP Device" menu item is displayed. With this menu item, it is possible to select the SONOS device to be controlled.

Figure 102: Multimedia element - UPnP configuration

Requirements for controlling SONOS devices
In order to be able to control the radio stations of SONOS devices using the multimedia control element, it is necessary to first assign the respective SONOS players the required radio stations in the **CUBEVISION**MODULE. To do this, please open the "Sonos (UPnP)" configuration as described in chapter "Extras".

SQUEEZEBOX CONTROLLER

In order to control a Squeezebox or an **AUDIO**MODULE using the multimedia control element, "Squeezebox Controller" must be selected in the "System" menu. After the selection has been made, the "Select Squeezebox" button displaying the Squeezebox devices and **AUDIO**MODULE available for linkage in the network appears. Select the required device and confirm the dialog with "OK".
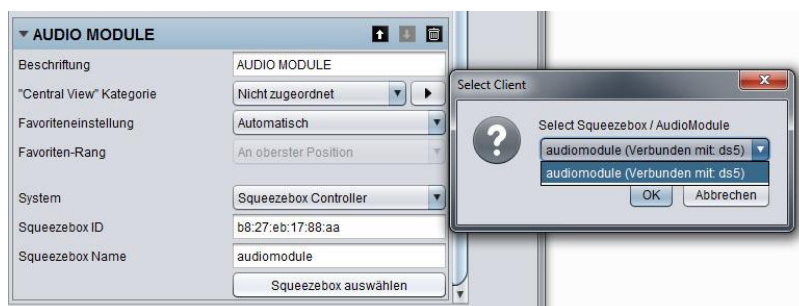
Figure 103: Multimedia element - Squeezebox Controller configuration

Requirements for the control of Squeezebox players and the AUDIO MODULE
Please note that at least one Squeezebox player instance and a Logitech Media Server with xPL Hub and ExPL Plugin must be available in the network in order to control Squeezebox players and the **AUDIO**MODULE. For further information, please refer to the **AUDIO**MODULE documentation.

MULTIMEDIA CONTROL IN THE PHONE PRESENTATION

The extended element view of the multimedia control element in the phone presentation of CUBEVISION differs from that in the tablet presentation.

Figure 104: Multimedia EEV in the phone presentation

EEV view 1

In the first layer of the phone EEV view, the Cover Art and the "Play/Pause", "Volume Up/Down", "Mute" (bottom) and "Next Title/Previous Title", "Title" (top) control elements are shown.

EEV view 2

Use the "View" symbol to switch to the second layer of the EEV. In the second layer of the phone EEV view, additional information such as "Artist", "Title" and "Album" is displayed.
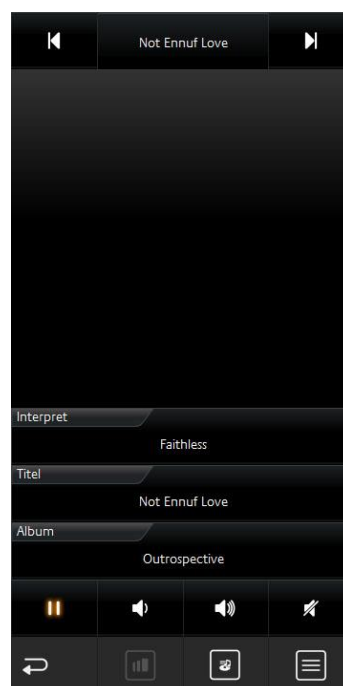
Figure 105: Second layer of the Multimedia EEV in the phone presentation

Playlist selection

A playlist selection is called using the "Playlist" symbol. If a SONOS device has been linked to the multimedia control element, the radio stations linked in the "Sonos (UPnP) Configuration" can be chosen here (see above or in chapter "Extras"). If an **AUDIO**MODULE or a Squeezebox has been linked, the playlists created in the Logitech Media Server are available here.

Figure 106: Multimedia EEV - playlist selection

6.2.10   WEATHER (LOKAL KNX)

- Option: Operability?   No
- Extended view: No
- Height units: max. 5

This is an control element for simply showing measured data of the home weather station, in the CUBEVISION. The element standardly displays (across the complete width of the control element) the outdoor temperature in the first line. Following lines are divided in two columns. Every field shows beside of the measured value, an identifier, the unit of the measured value and a suitable symbol. (see figure 44).
Beside the temperature indicator, following measured values are applied with symbols: These are:

- Wind speed and direction
- Brightness
- Air pressure and humidity
- Percipitation

Figure 107: Element Weather (Local KNX

If the desired type will not be displayed, the seventh type is ready, which can be used universally. The only difference to the other types is, that this type displays no symbol in visualization. In figure 44 for example, both values in the second line (h.temp and t.temp) are created by the universal type.

This control element has got following configuration fields (identifier see figure below**):**

1. **Temperature Data type.** For temperature value, data types EIS5 and EIS9 are selectable.
2. **Temperature Address.** This group address is designated for outdoor temperature. The value will be displayed in the first line of the control element.
3. **Append/modify/delete.** By these buttons, additional measured values can be appended, deleted or modified. If deleting, marked values of the list will be erased. By appending and modifying, another configuration window will open (see figure 46), in which new measured values can be applied or existing values could be modified. Options:
    a. **Type.** For weather control element, the six most usual measure values are deposited with a symbol. These are the types: wind speed, wind direction, brightness, air pressure, humidity, percipitation and the universal value. If one of the types will be selected, following the two fields "name" and "unit" will be filled in automatically. But these entries can be modified afterwards.
    b. **Name.** Identifier for this measured value, which are placed in CUBEVISION below the measured value
    c. **Unit.** The unit, which will be entered here, will be shown in CUBEVISION under the measured value.
    d. **Value format.** In this field the formatting of the measured values takes place. The Pre- and post decimal places of the value object can be defined as follows. A "0" means a fixed digit and will be displayed always. A "#" is one optional digit (as it is used commonly for post-decimal places) and only will be displayed on demand. The "." signifies the decimal point.
    e. **Address.** The real group address of the measured value.
    f. **Data type.** For value display, at this place data type will be selected, which has to be shown. For selection are DTP1.002, DTP5.001, DTP5.010, DTP7.001, DTP9.001 and DTP 14.
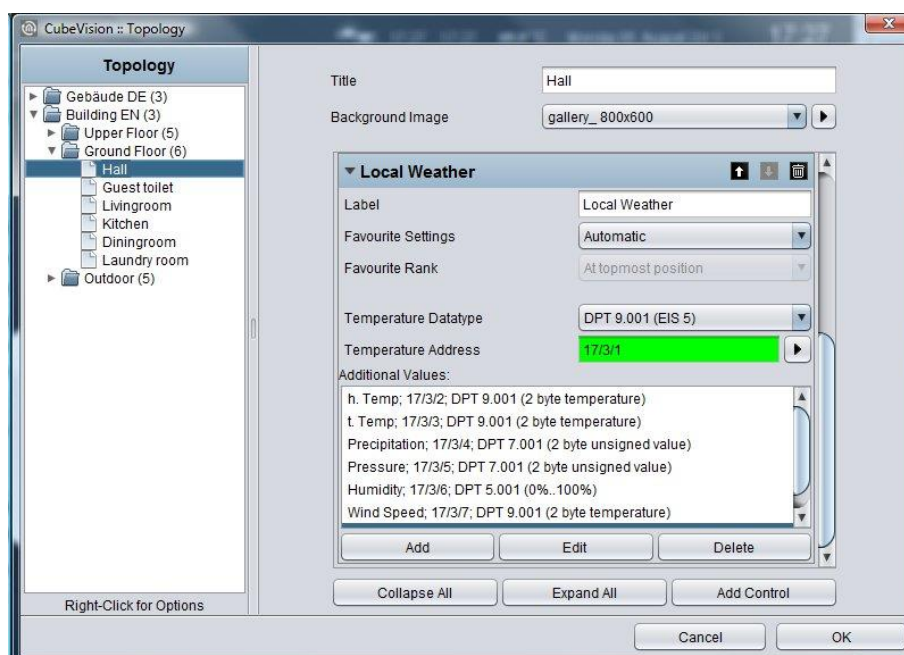
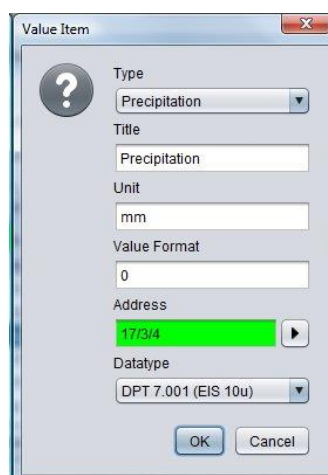**Figure 108: Configuration window WEATHER (local KNX)**

Figure 109: Configuration of measured value

6.2.11 WEATHER (INTERNET)

- Option: Operability No
- Extended view: Yes
- Height units: 2

If there is no local weather station or weather data should be displayed from a certain place, CUBEVISION is able to download

Figure 110: Element Weather (INTERNET)

weather data out of the internet. The control element has got two types of a view. In view for ICP and ECP, actual time, day of the week, actual temperature, actual wind speed, rain probability and a icon, which shows the actual weather conditions (see figure 47).

In the second view, additional to the stated data, air pressure, time, time of sunrise and sunset, a four days weather forecast (incl. lowest and highest temperature) and four diagrams (illustrating temperature [incl. highest and lowest temperature], humidity, wind speed and precipitation) will be displayed (see figure 48). Accurate values will be shown by "tracing" the diagram with finger or mouse. The values will be displayed in a kind of a speech ballon.

Figure 111: Extended element view of weather (INTERNET)

In spite of the enormous information and the comfortable display of data, the configuration of this control element only consists of two fields, which have to be filled in. There are: 1 These will be: 1. time zone (necessary for displaying the time of sunrise and sunset correctly) and 2. the name of the town, which weather data should be displayed. The town, whose weather data should be displayed. When these details are done, editor will search for the desired town. By the help of a hit list, desired town will be selected and confirmed. That`s all. Figure 49 shows configuration of control element and figure 50 displays the hit list of searched town „Dortmund".
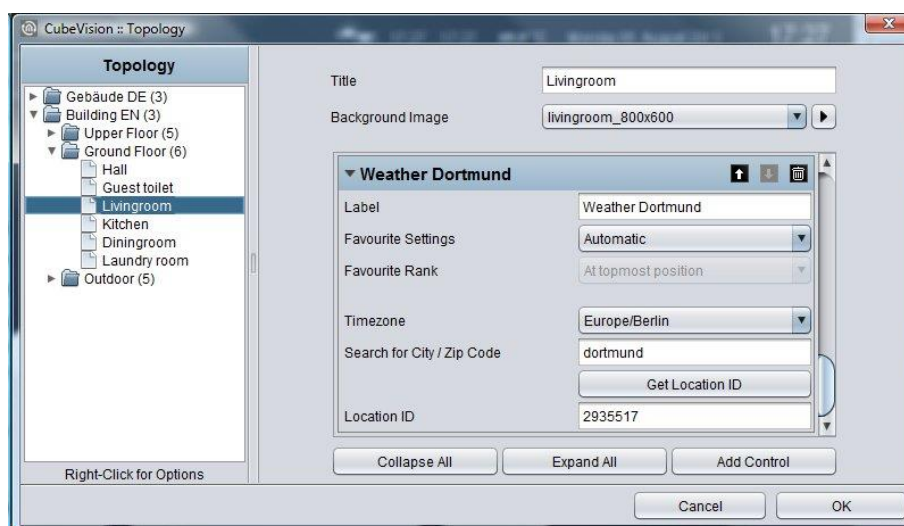
Figure 112: Hit list. Selection Configuration window of WEATHER (INTERNET)
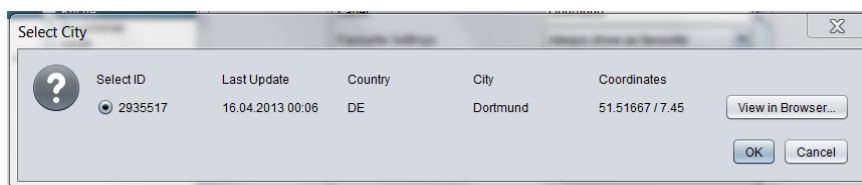
Figure 113: Hit list. Selection window of town

WEATHER (INTERNET) IN THE PHONE PRESENTATION

The visualisation in the phone presentation differs from the visualisation in the tablet presentation on a number of points.

The figure on the right-hand side (weather (Internet)) shows the current time, the day of the week, the current temperature, the current wind speed, the rain probability and an icon displaying the current weather conditions (see figure on the right-hand side, marked yellow).

By clicking the symbol circled in orange, you can access the EEV phone presentation of the weather (Internet) control element (see figure "Weather (Internet) EEV")

By clicking the symbol circled in red, you can access a list in which all weather (Internet) diagrams are listed (see figure "List of all weather (Internet) control elements).

By clicking the symbol circled in green, you can return to the menu.
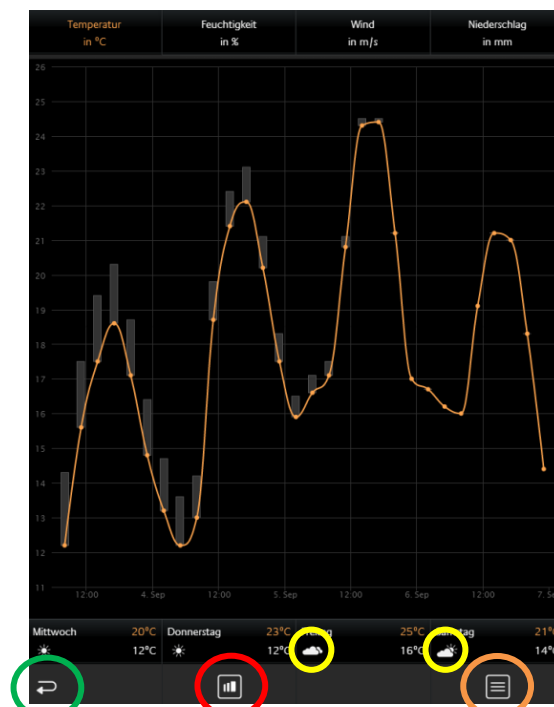
Figure 114: Weather (Internet)

In the EEV phone presentation as well as in the tablet presentation, the current day including time, temperature, wind speed, humidity, atmospheric pressure and sunrise / sunset is displayed.
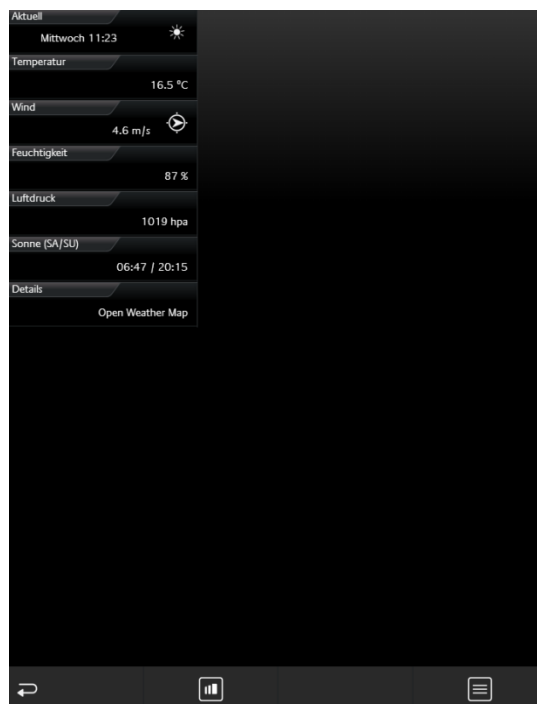
Figure 115: Weather (Internet) EEV

In the figure below, it is possible to choose between all weather (Internet) control elements in the room. Thus, tedious and unsystematic searching for different weather (internal) control elements is no longer necessary.
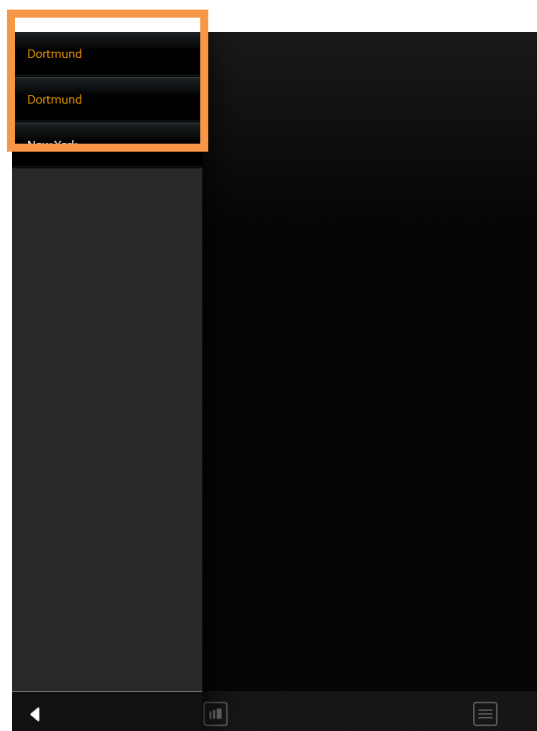
Figure 116: List of all weather (Internet) control elements

6.2.12   VALUES / DIAGRAMS

- Option: Operability?   No
- Extended view: Selectable
- Height units: 2-8

Behind the control element "values and diagrams", a lot of capabilities for visualization, comparing, sending and charting of values are situated. A function for trend and ranking completes the range of functions. For configuration, only a group address of the value has to be entered.

The control element has got one compact and one diagram view. The compact view is shown in ICP and ECP. At this place, only values are displayed (see figure 51). In EEV, one large diagram and further information additionally are situated. This extended view will be created by the editor, in case this option was activated before (see figure below).
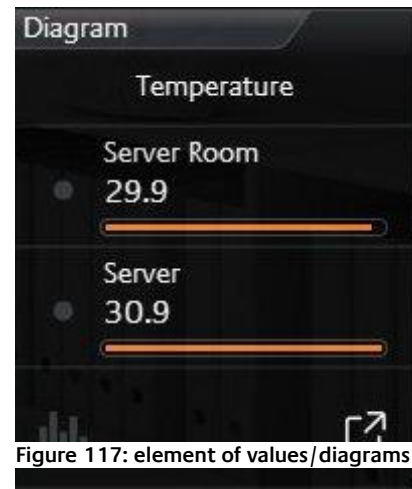
Figure 117: element of values/diagrams

Compact View: Following possibilities are situated in this view: (see figure right as well).

Trend function means, that in front of every value a symbol stands, that depicts, in which "direction" this value is in move within the hit list.

A triangle with the top up signifies, that the value has increased within the sequence (value is gone up). If the top points downwards, value has decreased within the sequence (value is gone down). A circle points out, that this value did not move within the sequence.

Ranking function has a bearing on sorting of values in the list. In case this function is activated, value will sort in decreased order, top down. The advantage is, that the biggest value always stands in the first place and doesn`t have to search in the list of values. If this function is disabled, values don`t change their order and will be displayed in the order, in which they was applied in the control element.

Option **bar graph**. This option extends every value with a bar graph. The bar of the highest value will be filled out totally, while the remaining bars will be filled out as a percentage (to the highest value). So you can recognize at a glance, as far as values differ from each other.

Figure 118: extended element view of values / diagrams

Because the control element will be used as a value display also, it **can send out values**, too. This option can be activated for all values. In visualization, this option will be shown by a "notepad and pen" symbol, which is always situated right beside the value. By a click on this symbol, within the value/diagram control element, a numeric field opens, by which value can be entered and transmitted conveniently

Extended (diagram) View: Here the functions and hints to the diagram.

To open the diagram, a click on the symbol in the lowest line of the control element (see figure above) will be enough. By the way, this line with the diagram symbol only will be displayed, if the diagram was activated for this control element.

Value for diagram selecting Always if the diagram will be opened (see figure above), also the list of applied values will be displayed. Out of this list, the user selects these values, which should be shown in the diagram. This list is placed on the right of the diagram (see figure above). Selection takes place by a simple click on desired values. By a click on the header, the list will be folded in.

Selected values will be listed below the diagram. There also the assigned colour of the value will be shown (see figure above). In case, one of the selected values should be erased out of diagram again, this can happen by dragging out the selected value upwards out of the list (below diagram). While dragging out the value, a symbol of a trash barrel will appear.

To read more precise values out of a diagram, it will be enough to move a finger over the desired graph. In this way a **speech balloon** opens, which will show the point of time, the identifier, the unit and the value. In figure below such a speech balloon is seen. Also possible is to tap the position in the graph; this option is more suitable for touch visualization clients. Graphs also allow zooming, which enables to scale for a detailed view. Zoom area simply will be drawn up by the mouse (with pushed button) or by a finger (horizontal movement). Figure 54 shows a blue arrow, which marks, how far the time range was drawn up. Figure below displays, how desired time range has be enlarged afterwards. By the button "Reset Zoom", enlargement will be cancelled. This button only will be displayed in the centre above diagram, if the time range was enlarged.
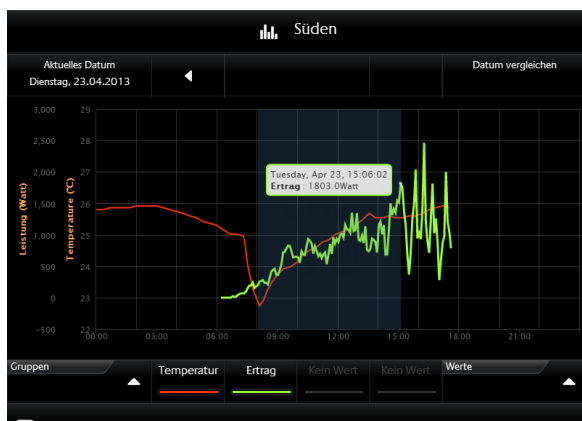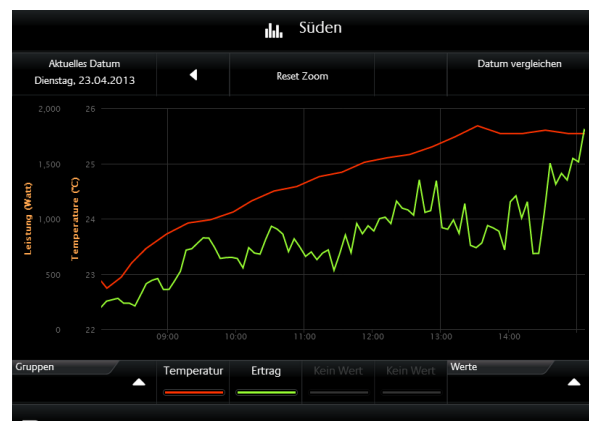

Figure 120: Zoom area enlarged

Figure 119: Diagram area enlarged

Time range modify. By the help of the two arrows above the diagram, you can page up (to the right) or page down (to the left) the displayed time range. The current date is shown on the left side above the diagram
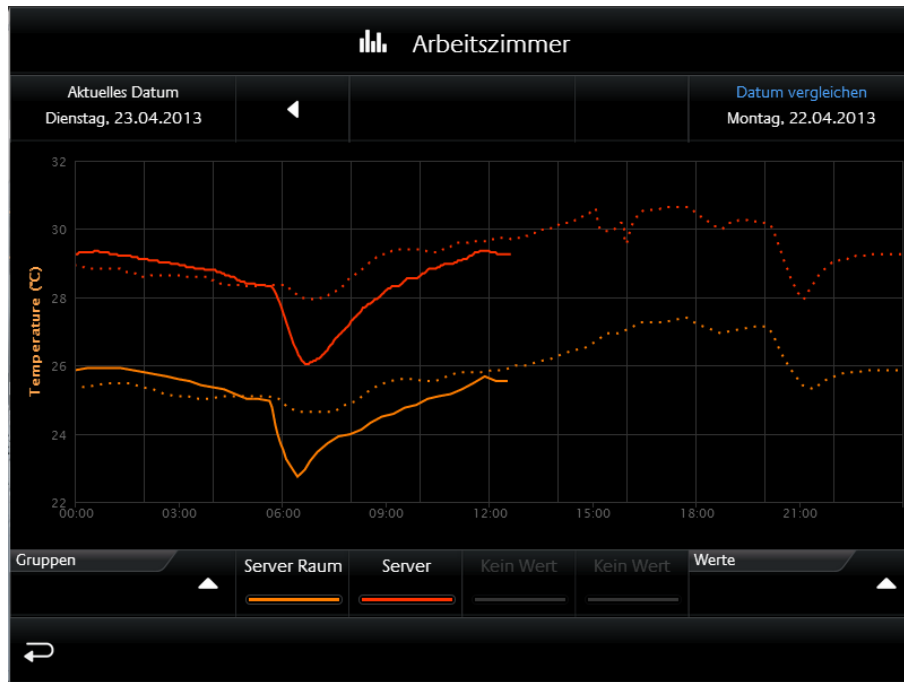
Figure 121: Temperature comparison

Value comparison. On the right side, above diagram, the **freeze function** (Date comparison) is located. This function makes possible to "freeze" the current pointed graph. These freeze graphs still will be shown, if now the time range will be modified. So it is possible to make a comparison between the values out of different time ranges. In figure above temperatures from "server room" and "server" will be compared with temperatures of the previous day. Time ranges are displayed above the diagram, on the left (current date, that can be modified; solid graph) and on the right side (confirmed (reference) date; "freeze" graph will be pointed out in a spotted line)
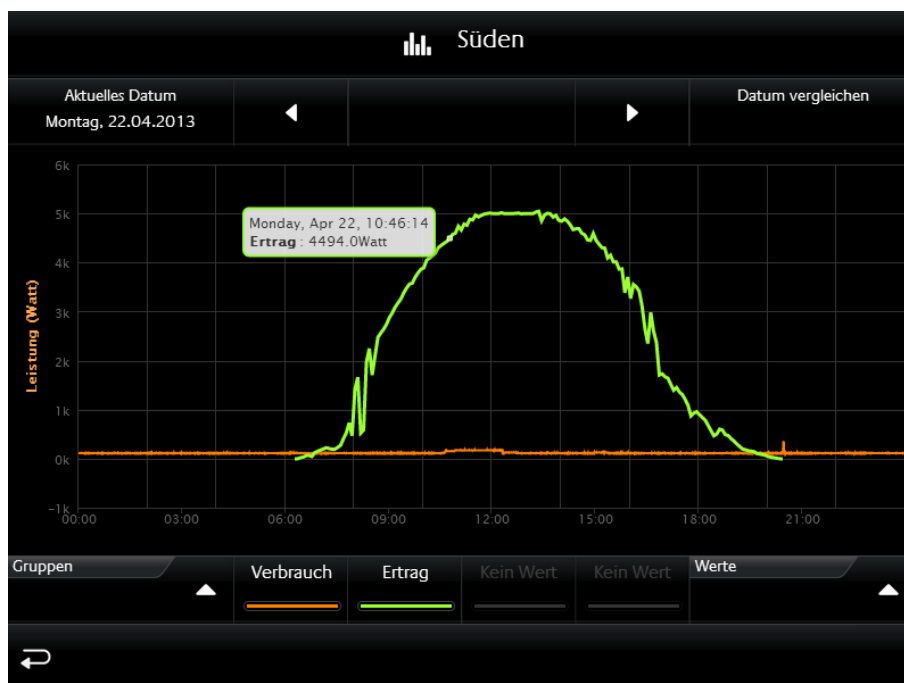
Figure 122: Different values from different diagrams

Comparing values of different diagrams with each other. Another feature of this control element is, that selected diagram values will not be eliminated, if the diagram will be closed and in another room one another diagram will be opened. So values of different diagrams can be displayed together and compared with each other.

Example: In figure above two values are compared with each other. The green value "return" comes out of diagram „pv-unit", which is located in the outdoor view South. The second (orange) value shows

the consumption and is located in diagram "home office". So both values out of different diagrams can be placed in one diagram (in this example, the value will be displayed in the same unit).

Also in the event that values with different units should be integrated in one diagram, diagram control element has a solution. In a further example (figure below), two values are compared with each other, which have got **different units** (temperature, power). In this case, diagram control element inserts a second y-axis with the second value`s unit. In example both axis are placed on the left side, but it is configurable, on which side the axis should be displayed.

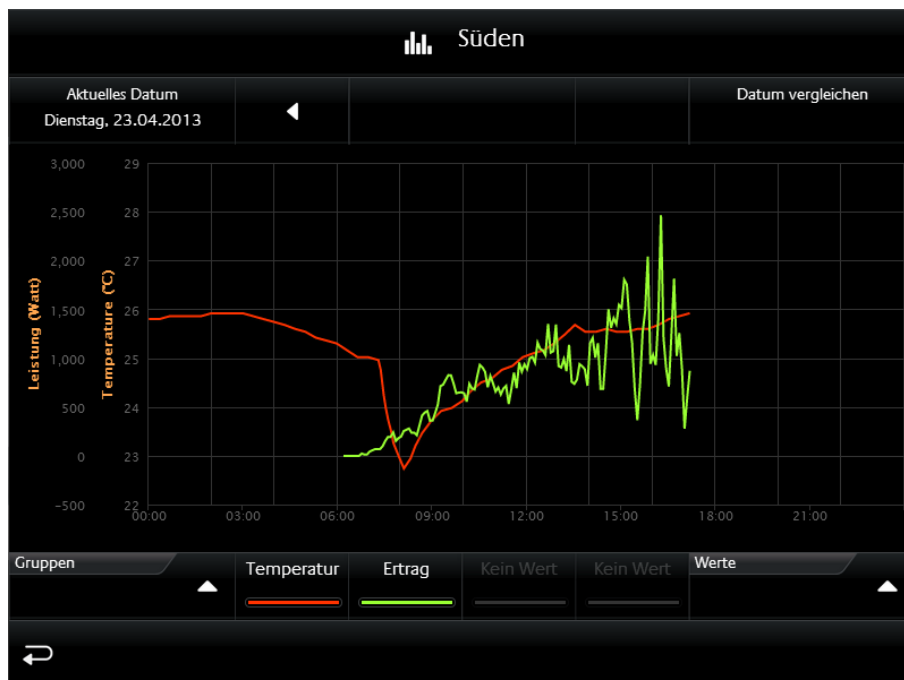**Figure 123: Comparison of different values with different units.**

TIPP: These units can be applied in the editor, configured and used again in other diagrams. This ensures that always the same unit, formatting and identifier will be displayed.

This control element has got following configuration fields (identifier see figure below**):**

1. **Description of values.** This text will be used for the headline in visualization and in diagram.
2. **To display as a diagram.** This option activates the diagram of an control element. In doing so, an additional line will be inserted, by which the diagram can be opened. (see figure "element of values/diagrams")
3. **With bar graph.** This option blends a bar graph below every value. The bar of the highest value will be filled out totally, while the remaining bars will be filled out as a percentage to the highest value.(see figure "element of values/diagrams")
4. **To sort values.** Thereby, the function will be activated for sorting the values in a descending order top down. If this function is disabled, control element displays the values in that order, in which they were applied.
5. **Values.** In this field, applied values resp. group addresses will be listed, applied and arranged, which should be displayed. To do this, three buttons are located below the field.
   a. Delete. For erasing marked group addresses resp. values off the list.
   b. Modify. Opens configuration window of marked group address.
   c. Append. Opens configuration window to append a new group address resp. value.

   Figure "configuration window value"shows the configuration window, in case a new value was appended or modified (modify button). The options:
   - Name. This identifier will be shown in visualization control element above the value or in diagram above the colour.
   - Address. This is the group address of the value, which is displayed. Group address can be selected by ESF selection dialogue (button with a triangle, which points to the right). If option „data entry" is enabled, control element also will send to this group address.

- Data type. Data type which describes the value. Possible choices are: DTP1.001 (EIS1), DTP5.001 (EIS6), DTP5.010 (EIS14u), DTP6.010 (EIS14s), DTP7.001 (EIS10u), DTP8.001 (EIS10s), DTP9.001 (EIS5), DTP12.001 (EIS11u), DTP13.001 (EIS11s) and DTP14 (EIS9).
- Factor. Received group address will be multiplied by this factor.
- Offset: Offset value will be added to the received value, before it will be displayed in visualization. <u>Hint for factor und offset:</u> The result of this calculation will be used solely in visualization. Order of calculation: First, the factor will be calculated and afterwards the offset value will be added, before the result will be shown in visualization or in diagram.
- Entering values: This option permits the user, to send values to this group address. Thereto a symbol will be blended beside the value, which opens a numeric field for entering desired value.
- Input: min. / max. value. There to a value range with an upper or lower limit can be defined for entering values.
- Y-axis und selection dialogue: Herewith the unit for the y-axis can be chosen. Units, which often will be used, can be „applied", to avoid configuration of them for every control control element again and again. Applied units will be listed in a pull-down menu and can be selected easily. In another configuration window (see figure 60), which will be opened with the selection dialogue, units can be administrated. In this configuration window, units are configured centrally. Possibilities of configuration:

  On the left, existing y-axis configurations are listed. By + and – button below this list, new configurations will be appended or deleted.
  - o Name. This name will be displayed vertically combined with y-axis and in the tooltip
  - o Unit. Unit will be displayed in brackets after the unit`s name.
  - o Page. Defines, whether axis will be shown left or right of diagram.
  - o Minimum/Maximum Limit. This option activates the min or max border of y-axis. In this way, a fixed scaling of y-axis will be achieved. If no limits were set, diagram control element scales automatically the y-axis.
  - o Minimum/Maximum Value. These data represents the upper and lower border of y-axis.
- Graphics Colour. The colour, which is selected here, will be used for the graph.
- To draw in levels. If this option is enabled, graph will be drawn in grades. This is useful for example, when it is about an EIS1 data type.
- Type of graph. The type of graph determines the method of data processing for the graph.
  - o Absolute: The absolute value is pointed out. Generally temperatures or other actual measured data.
  - o Difference: The difference curve can be used to create day profiles of steadily increasing actual counts.
- Interval. If for type of the graph the option difference will be selected, the interval time can be specified in minutes by this parameter, in which the difference to the last interval will be calculated. The larger the interval time, the more smoothed the graph will appear.
- Timeout. If a sensor will send out no value for a certain time, graph can be blanked out for this period. The parameter timeout defines, after how many minutes the graph will be blanked out.
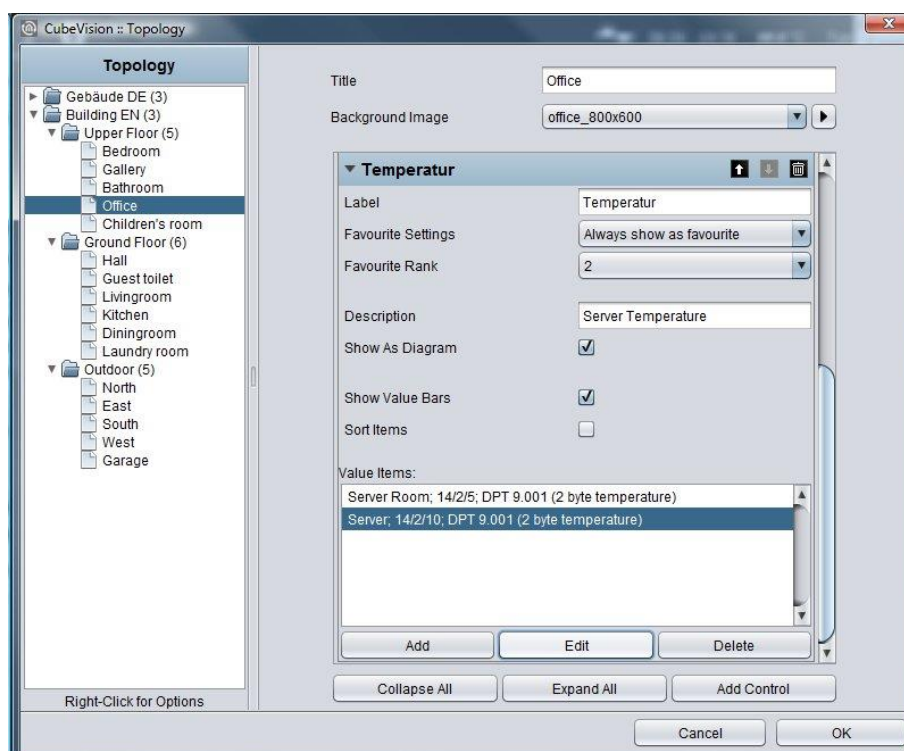
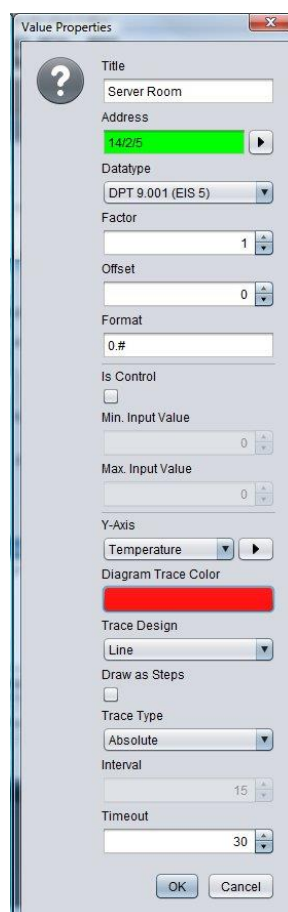**Figure 124: Configuration window of value/diagram element**

Figure 125: Configuration window value
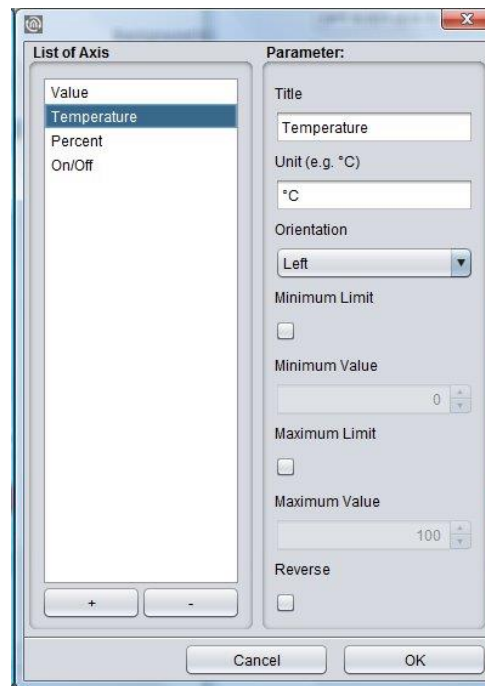
Figure 126: Configuration window units

VALUES / DIAGRAMS IN THE PHONE PRESENTATION

The visualisation in the phone presentation differs from the visualisation in the tablet presentation on a number of points.

By clicking the symbol circled in orange, you can access the EEV phone presentation of the "Value / Diagram" control element.

By clicking the symbol circled in red, you can access a list in which all diagrams are listed.

Clicking the symbol circled in green, you can return to the menu.
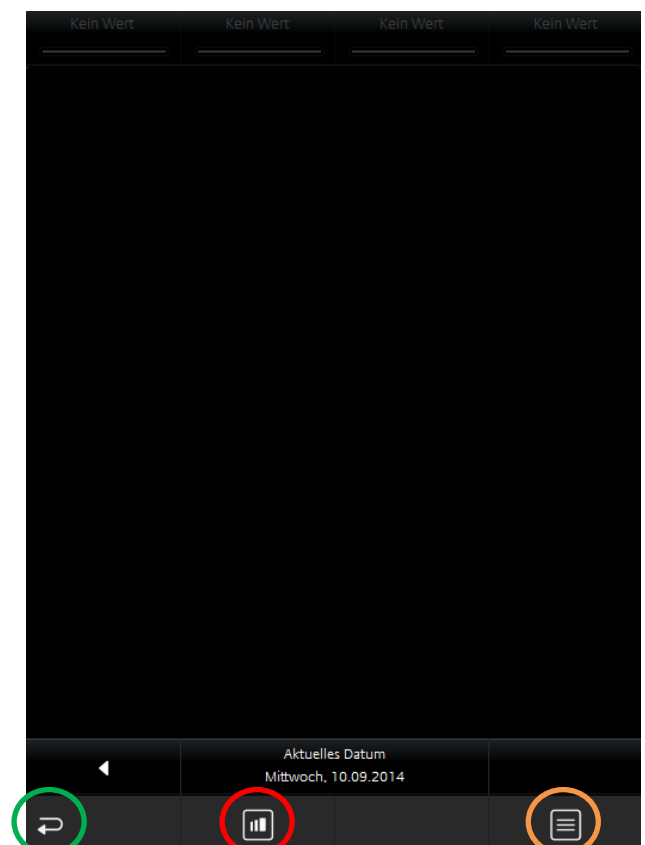
Figure 127: Diagrams

In the EEV phone presentation, further details about the respective diagrams can be found, just like in the tablet presentation.

Figure 128: Diagrams, extended element view

In the figure below, it is possible to choose between all diagram control elements in the room. Thus, tedious and unsystematic searching for different diagram control elements is no longer necessary.

Figure 129: List of all diagrams

6.2.13   GROUP SWITCH / SCENES

- Option: Operability?   No
- Extended view: No
- Height units: 1 und 2

Sense and purpose of this control element is, that a group of symbols, which contain different group addresses (four at a max), can be collected/placed in one control element. The function behind it (that`s the actual feature) but will show only one of the symbols as active. Independent from that is, whether the symbols carry the same group address or not.

In brief. Die **Fehler! Verweisquelle konnte nicht gefunden werden.** shows a group switch with two functions, at one point the gate and at another point the barrier. If now for every function a different group address will be used, it has to be assured, that always only this group address will be displayed as active, which was released at last. In a regular channel, such a function has to ensured lavishly, that always only one group address resp. symbol may be shown as active. In the scene control element, this function already is implemented.

Layout of the control element`s outline will be selectable freely. **Fehler! Verweisquelle konnte nicht gefunden werden.**, **Fehler! Verweisquelle konnte nicht gefunden werden.** und **Fehler! Verweisquelle konnte nicht gefunden werden.** display several layouts. In a height unit, it can be utilized four function inclusive symbols at a max, but without lettering. The other two layouts offer a display over two height units. On the one hand for two functions with symbol and a long lettering and on the other hand with four functions with symbols and a short lettering. For selection there are 30 several symbols available.

Beside the different group addresses, values and data types can be selected certainly.

Figure 130: Element group switch – only icons

Figure 131: Element group switch - icons and a long text

Figure 132: Element group switch - Icons und a short text

This control element has got following configuration fields (identifier see figure below**):**

1. **Width for function.** With it, the layout of the control element will be determined. For selection are available "Icons" (figure "Element group switch – only icons"), "icons and a short text" (see figure above) and "Icons and a long test" (figure above middle).
2. **Highlight active.** One option, whether the symbols in active state also will be highlighted.
3. **Functions.** This window lists the group addresses for the functions. For administrating of group addresses, buttons „Append", „Modify" and „Delete" are available below the list
4. **Configuration window functions.** The Figure below show the possibilities of configuration.
   a. Icon. Here are situated over 30 different icons, for realizing an optical hint to a function.
   b. Name. The name will be displayed with its icon, except the single-line layout, which only shows the icons.
   c. Address. Group address, on which it will be transmitted, if this function is released.
   d. Data type. Choice of data type (DTP 5.010 (EIS14u) and DTP 1.001 (EIS1)) of the value, which will be sent and received.
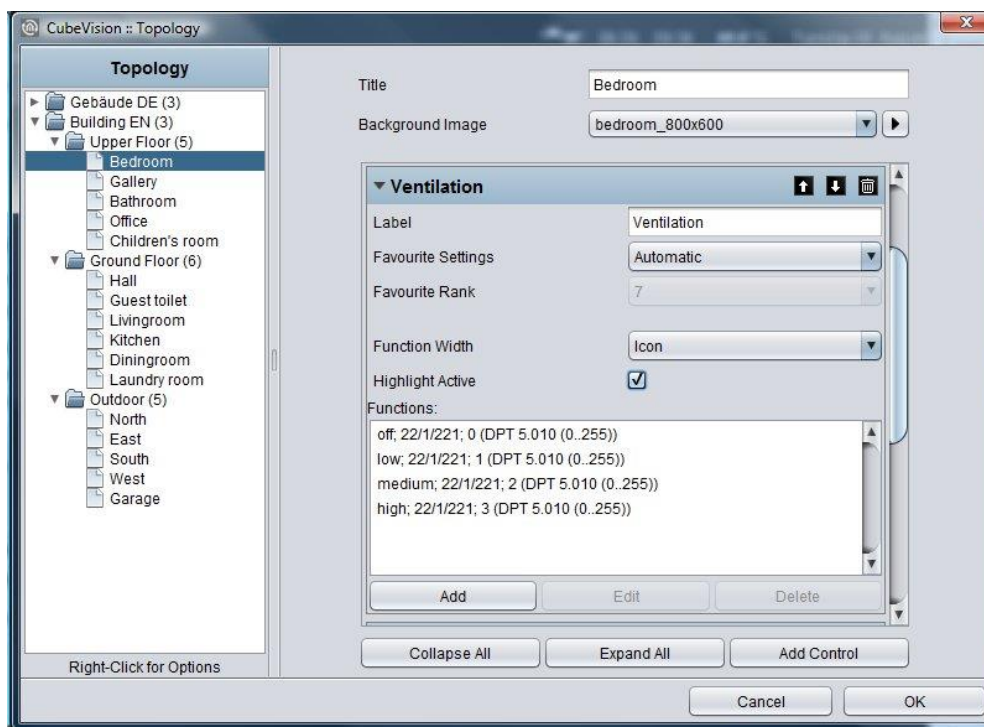   e. Value. The value, which should be sent to the group address, can be entered here.

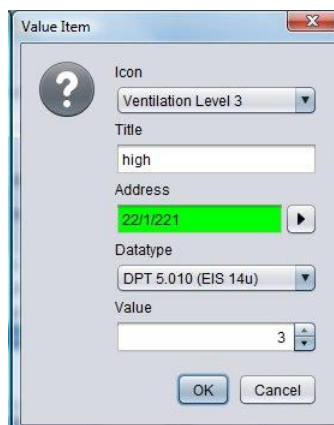Figure 133: Configuration window of „group switch/scene"

Figure 134: Scenes element "appending group address"

7 CONFIGURATION

7.1 LOGGING IN

In order to access the configuration and the CUBEVISION Editor, you first must log in. To do this, click "Log In" at the top right of the browser window and enter your user data. In the condition on delivery, the user data is as shown below:
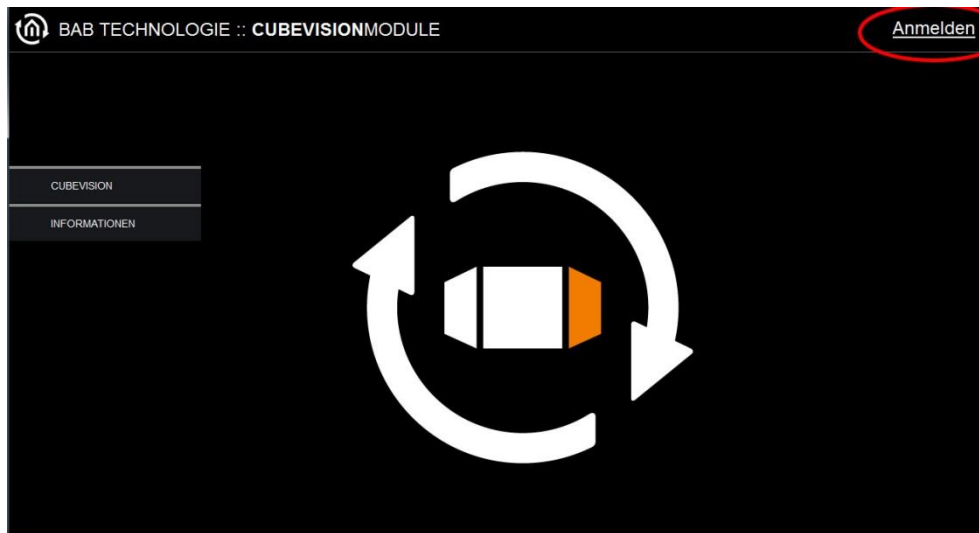

Figure 135: Web interface login

Username: admin
Password: admin

Note: When logging in for the first time, you are asked to change the admin password. Please memorise the password, as the device cannot be reset!

7.2 GENERAL
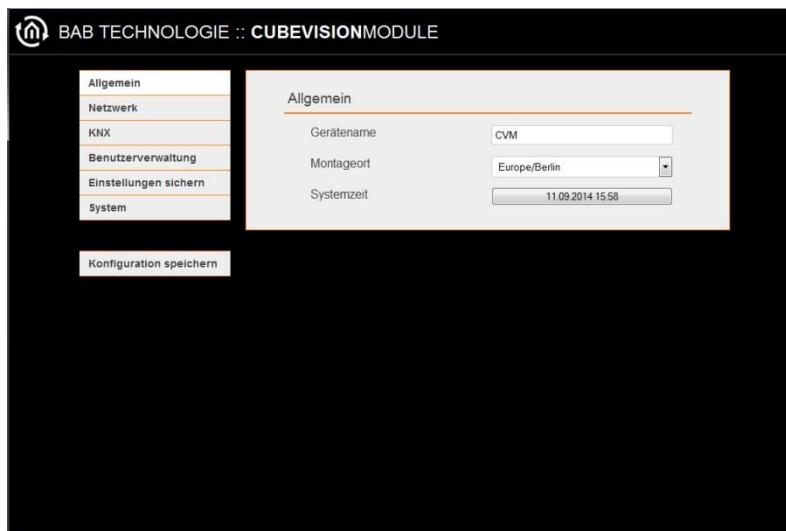
The following settings can be made in the "General" menu:

Figure 136: Configuration - General

Device name
Assign a unique device name in order to be able to distinguish the device from other devices where necessary. The device name is displayed in the DiscoveryTool and used as hostname [device name].local.

Installation site
The installation site primarily determines the local system time of the device. Adjust to the correct time zone.

System time
The current system time of the device is shown. By clicking the button, the system time of the device is synchronised with that of the local PC.

7.3 NETWORK

In the "Network" menu item, several changes can be made, for example changing the IP address, DNS server or the NTP server. In addition, the DHCP can be switched on / off.

DHCP: If DHCP is active, the device automatically obtains the network settings. A DHCP server must be available in the local network.

IP address / subnet mask / gateway:

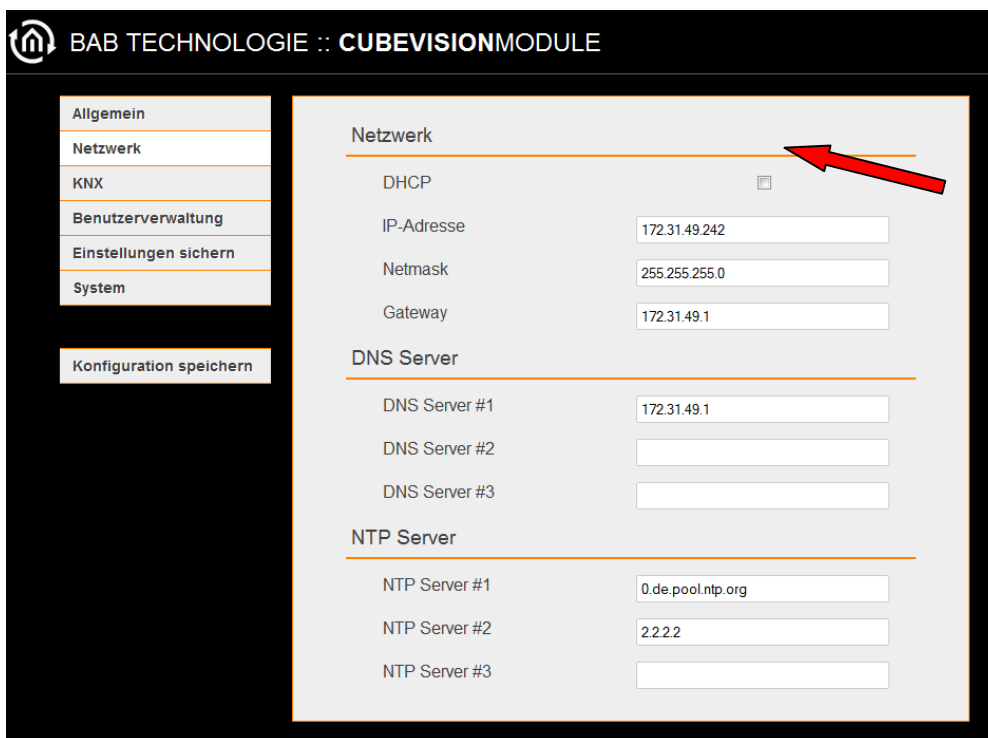If DHCP is not activated, you must adjust the typical network parameters to the existing network.

DNS server: DNS is the abbreviation for Domain Name System. The DNS server converts Internet addresses, for example "www.bab-tec.de/" into the IP address 85.214.89.170 and vice versa.

NTP server: Configure an NTP server in order to ensure that the device can synchronise its internal clock (system time).

NTP server list:
http://www.pool.ntp.org/zone/europe

Figure 137: Configuration Network

7.4 KNX

The KNX-specific settings of the **CUBEVISION**MODULE are made in the "KNX" menu.

Physical address:	Here, you can determine the physical address to be used by the **CUBEVISION**MODULE in the KNX network. Please make sure that the physical address corresponds to the installation site and does not occur twice.
KNXnet/IP tunneling address:	This address is used by the internal KNXnet/IP server for a KNXnet/IP tunneling connection established to the device (using the CVM as a programming interface). Please note that this address must not be the same as the physical address (see above) and that it must not be used by any other participant in the line either.
KNXnet/IP routing:	Activates KNXnet/IP routing for the coupling of lines and areas via IP. Can only be activated if the physical address corresponds to that of a line or area coupler. KNXnet/IP routing is based on multicast and all participants send a multicast group 224.0.23.12. Since multicast packages are usually not transferred by routers, "routing" only works within a subnet.
KNXnet/IP tunneling:	Activates the KNXnet/IP tunneling access to the device. This connection can be used to program KNX devices or to exchange data. The **CUBEVISION**MODULE is the server. The above-mentioned address is used as the physical address for the connection. For each address, only one connection can be established at any one time. On the TCP/IP layer, the connection is made by means of unicast to UDP port 3671.

Figure 138: KNX

7.5 USER ADMINISTRATION

The user data required to access the **CUBEVISION**MODULE web interface is managed here. This user data has nothing to do with the user data for the visualisation, but is used to protect the configuration of the **CUBEVISION**MODULE. In order to change or add users, "User Administration" must be clicked in the "Configuration" menu item.

DISABLING PASSWORD RECOVERY

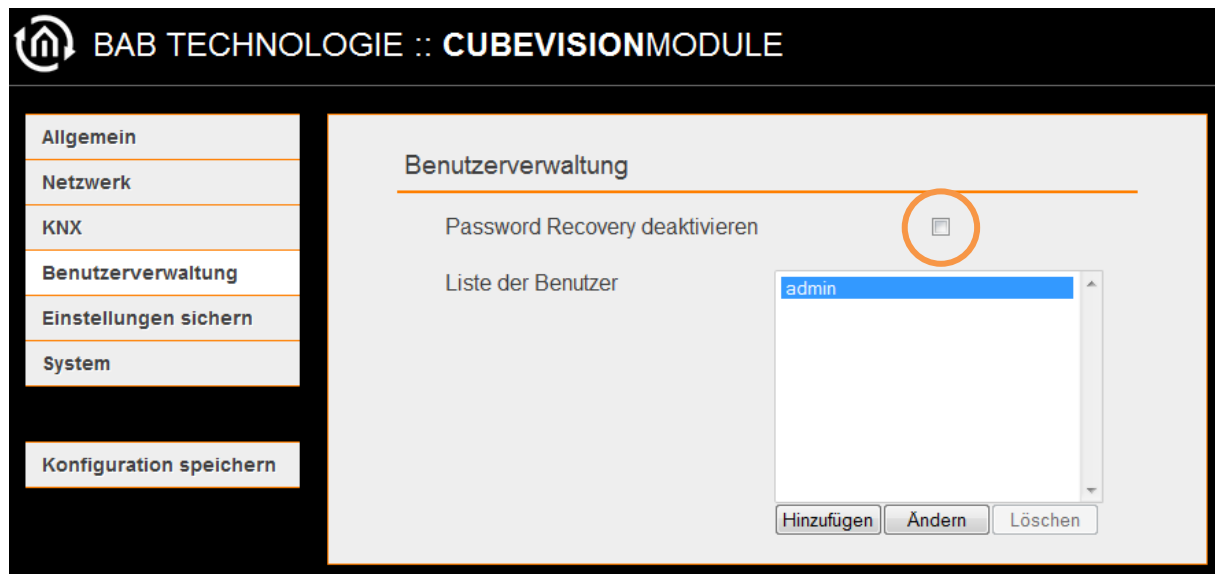If this option is deactivated, the device must be sent in if the admin user password is no longer known.

Figure 139: User administration

7.6   BACKUP / RESTORE

For safety reasons, the configuration data of the **CUBEVISION**MODULE should be backed up at regular intervals in order to ensure that the current configuration status can be restored at any time. A current backup is also required for firmware updates.

CREATING A BACKUP

Module:	By ticking this check box, you can choose whether only the configuration, CUBEVISION or both is/are to be backed up.

	Configuration:	As soon as this check box is ticked, the **CUBEVISION**MODULE configurations are saved (backed up).
	CUBEVISION:	As soon as this check box is ticked, the visualisation settings are saved.

Comment:	In this field, comments on the backup can be entered.

RESTORING A BACKUP

Select Backup (file):	Here, you can choose which backup is to be restored.
Module:	By ticking this check box, you can define whether the configuration, CUBEVISION or both is/are restored.

	Configuration:	As soon as the check box is ticked here, only the **CUBEVISION**MODULE configurations are restored.
	CUBEVISION:	As soon as this check box is ticked, the visualisation settings are restored.

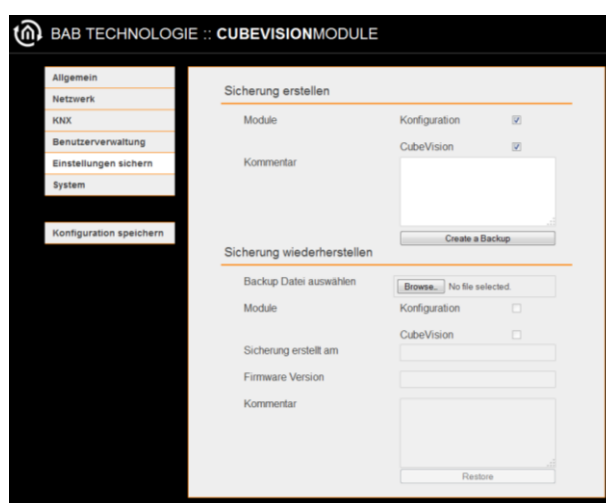|	
Backup creation date:	Here, the day/month/year the backup was created is shown.
Firmware Version:	In this field, the firmware version of the backup is shown.
Comment:	In this field, the comment made when creating the backup is displayed.

Figure 140: Restore settings

7.7 SYSTEM / FIRMWARE UPDATE

In general, each **CUBEVISION**MODULE firmware, version 1.0.1 and higher, can be updated.
The firmware update is free of charge. The current firmware files can be found on the BAB homepage.
Download the current firmware for the **CUBEVISION**MODULE. To do this, please proceed as described below:

http://www.bab-tec.de/index.php/download_en.html

1. Select "Configuration" – "System" in the **CUBEVISION**MODULE.
2. Now select the downloaded firmware file from your hard disk in the "Firmware Update" – "Browser" window.
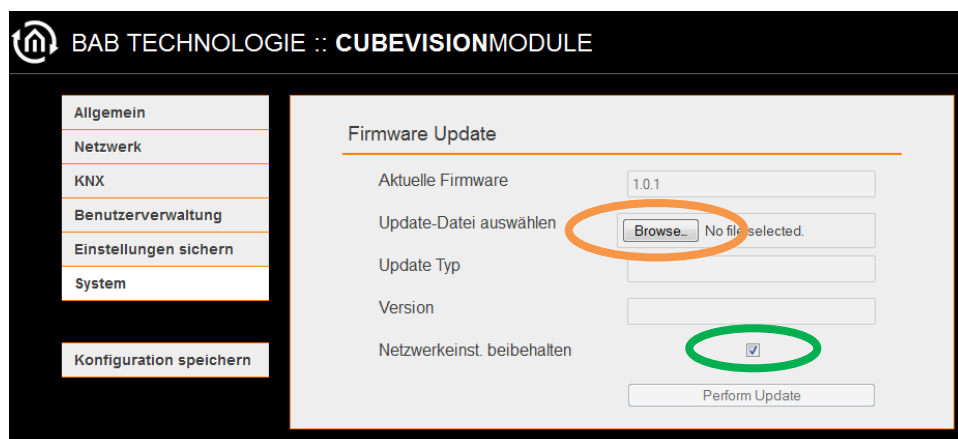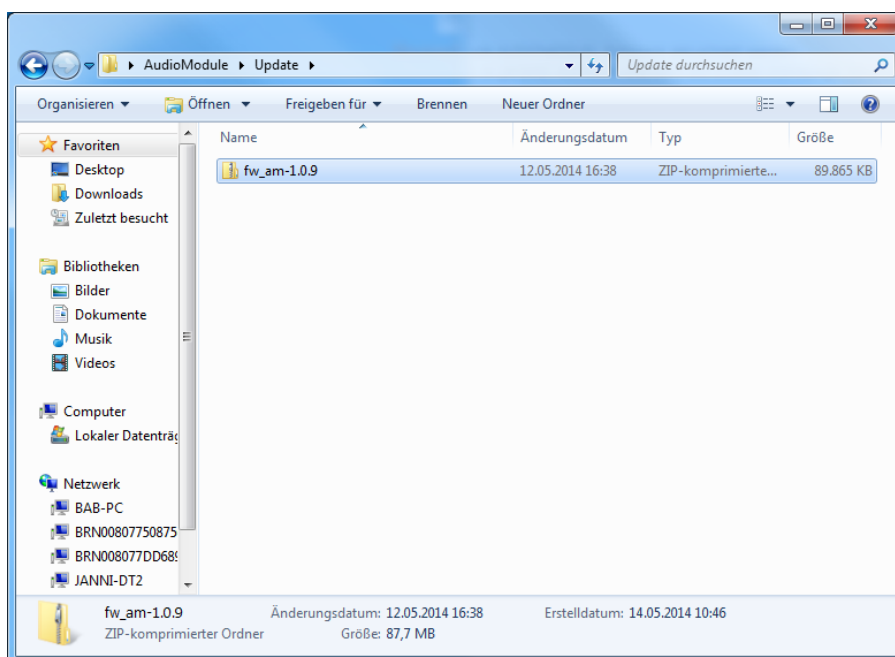
Figure 141: Firmware update

Figure 142: Selecting a firmware update

3. Do not remove the tick in the "Keep Network Settings" check box if the **CUBEVISION**MODULE is to keep its IP address settings after the update has been completed.
4. Click "Perform Update".

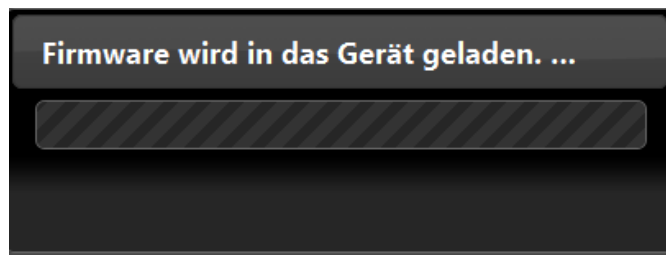Then the window shown below opens up (see figure above, "Uploading process").

Figure 143: Uploading process

Now the window shown in the figure below opens up. In this window, information on the progress of the uploading process can be found.

Figure 144: Update information

At the end of the uploading process, the new firmware was installed successfully. The **CUBEVISION**MODULE is available again.

7.8 SAVING THE CONFIGURATION

Each change made to the configuration data must be saved by means of the "Save Configuration" button.

7.9 EXITING THE CONFIGURATION MENU

In order to exit the menu and return to the main menu, use the home button or the return button of the web browser.

Figure 146: BAB Technologie home button

Figure 145: Return button in the browserv

7.10 LOGGING OUT

In order to log out from the web interface, press the "Log Out" button.

8   INFORMATION

All information on your **CUBEVISION**MODULE can be found here.

Please have this information ready if support is required.

BAB TECHNOLOGIE :: CUBEVISIONMODULE

Product Information

Product	CUBEVISION_MODULE
Manufacturer	BAB-Technologie GmbH
Version	1.0.1
Serial Number	BT1032294010
Temperature (System)	47.0°C

Third-Party Software Information

CometD is used under Apache License 2.0.

CometD JQuery Plugin is used under MIT License.

CryptoJS is used under BSD 3 license.

Jackson is used under Apache License 2.0.

Jersey is used under CDDL / GPL V2 (Classpath Exception).

jetty is used under Apache License 2.0.

JNotify is used under LGPLv2.

jQuery is used under MIT License.

jQueryUI is used under MIT License.

Logitech Media Server is used under GPL V2.

ptTimeSelect is used under MIT License.

SLF4J is used under MIT License.

syntaxhighlighter is used under MIT License.

zip.js is used under BSD license.

Figure 147: Information

9   APPENDIX

9.1   ICONS FOR CONTROLS

In the following figure, all 34 icons of controls are displayed:

Figure 148: Icons for controls

For following function, icons are available, each for active and inactive (sequence from left to right):

1. "Central ON",
2. "Central OFF",
3. "Lighting",
4. "Socket",
5. "Door",
6. "Garage",
7. "Caution",
8. "Bath taken",
9. "Sunblind",
10. "Fan On",
11. "Fan off",
12. "Fan level 0",
13. "Fan level 1",
14. "Fan level 2",
15. "Fan level 3",
16. "Scene",
17. "Rain",

18. "Wind",
19. "Door open",
20. "Door closed",
21. "Barrier open",
22. "Barrier closed",
23. "Locked",
24. "Unlocked",
25. "Music",
26. "Heating ON",
27. "Heating OFF",
28. "Water faucet open",
29. "Water faucet closed",
30. "Mail",
31. "Keycard present",
32. "Keycard absent",
33. "Bell" and
34. "Watering",