



b.a.b-technologie gmbh

# ComponentBuilder

## Dokumentation

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# 1 GENERAL

You can create your own indicator and control panels with free definable display- and controlelements with the ComponentBuilder. The indicator and control panels can be linked with group address and be a part of your eibPort visualisation. That way you can create a individual visualisation.

## Important information

The Using of the ComponentBuilder demands a period of vocational adjustment. It is only for practised users. Please follow the instructions of the user manual and take note of the hints

## 1.1 DAS PROGRAMMFENSTER

Ajax ist der Name einer Webtechnologie. Im **eibPort** wurde diese in erster Linie dafür eingesetzt um Geräte die keine Java Unterstützung bieten auch mit der „vollen“ Visualisierung versorgen zu können. Ajax ist genauso wie Java Plattformunabhängig und kann so für Web-Pads wie das iPad, für Mobiltelefone oder auch auf ganz normalen PC genutzt werden. Die Ajax Visualisierung wird aus den gleichen Daten wie die Java Visualisierung generiert. Allerdings werden zurzeit noch nicht alle Elemente und Funktionen aus der Java Visualisierung in der Ajax Visualisierung unterstützt.

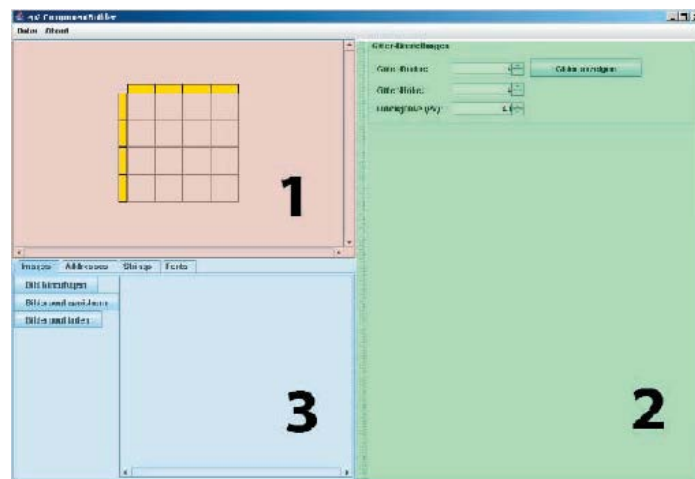


Figure 1: Program window

Window can classify in 3 areas.

### 1. Panel preview

In this area you can see all segments of the panel. To configure an element, you have to click on it.

### 2. Configuration

Here can you chose the size of the segments. When one segment is marked, you can see here the options of the configuration.

### 3. Datenpools

In the data pools all necessary data of the current panel are connected and managed. Pictures, addresses, strings and fonts appertain to that.

## 1.2 DAS MENU DATEI

**Open** open a stored with the ending .btn

**Save** store a panel with the ending .btn

**Close** end the programm

## 1.3 DEFINING PANEL

A panel consist of minimum of one and at the most 10 x 10 elements. Every segment can be define as one of four element types.

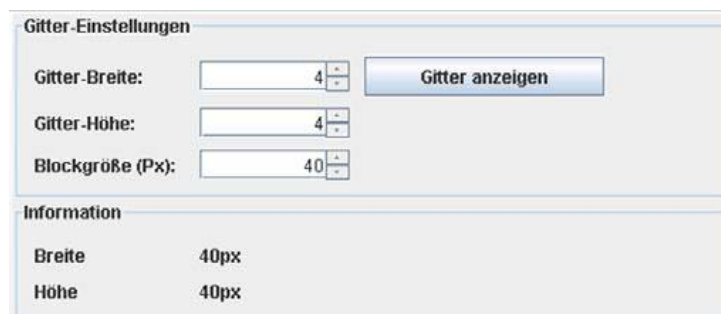


Figure 2: Grid settings

### 1.3.1 GRID-EINSTELLUNGEN

Grid-width	number of columns, max 10
Grid-height	number of lines, max 10
Block size (Px)	height/width of a segments, max 200 Pixel. Is no longer true if the row height and column width is changed.
Show grid	On/Off of the grid
Information	height and width of the marked cell

### 1.3.2 COLUMN WIDTH AND LINE HEIGHT

width click on the yellow field next the column

height click on the yellow next the line and enter the height



Figure 3: Column width and line height



### 1.3.3 COMBINING SEGMENTS

Several segments can be combined. For it keep pressed the control key (ctr) and select the corresponding segments with the mouse pointer. With a right click open you a popup menu and you can combine them with „Verbinden“. Only segments which form together a rectangular segment without hiatuses can be combined. With the menu item „Unterbrechen“ can you divide them back onto their primary division.

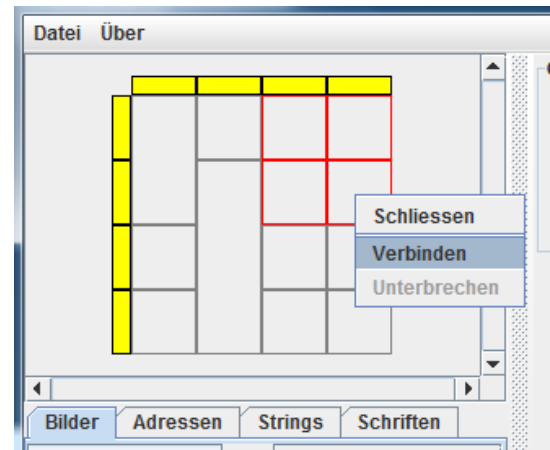


Figure 4: Combining Segments

## 2 DATENPOOL

The data pool serves data needed for the administration for the current panel. These data cover graphics, addresses, strings and fonts. These data must be added in the single pools before they can be used during the creation of the panels.

### 2.1 IMAGES

The pictures for a panel can be loaded separately into the pool. Then these are available at the graphic selection and can be used for the segments as background. All pictures can be stored in a picture pool. This file with the ending .pool can be loaded later again also for other panels.

Image files with following picture format / ending are supported:  
jpeg / .jpg / .gif and .png

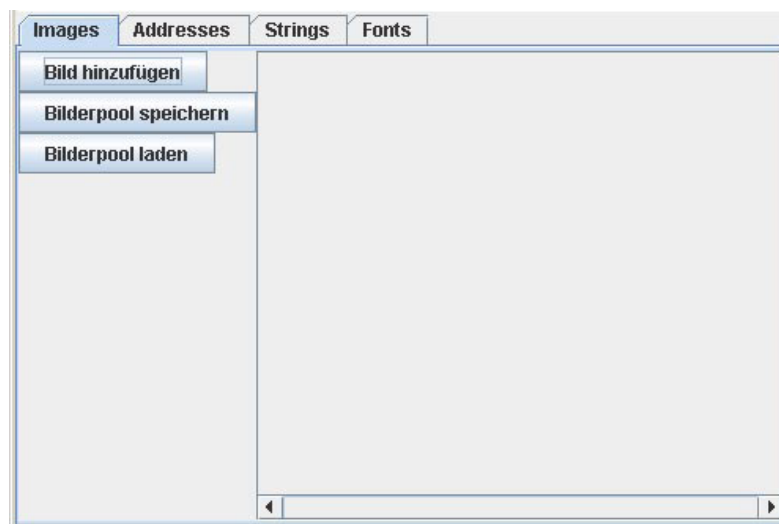


Figure 5: Images

About a right click single pictures can be delete again from the picture pool.

## 2.2 ADDRESSES

In the address pool address descriptions are assigned which are replaced by the real group addresses in the visualization editor. An address is defined by the EIS-type, factor and offset.

Following EIS-types are supported:

- EIS1: 1 bit switching
- EIS3 : 3 byte time (factor: 1, offset : 0)
- EIS4: 3 byte date (factor: 1, offset : 0)
- EIS5: 2 byte floating point
- EIS6: 1 byte 0-100%
- EIS9: 4 byte floating point
- EIS10: 2 byte integer
- EIS11: 4 byte integer
- EIS14: 1 byte 0-255

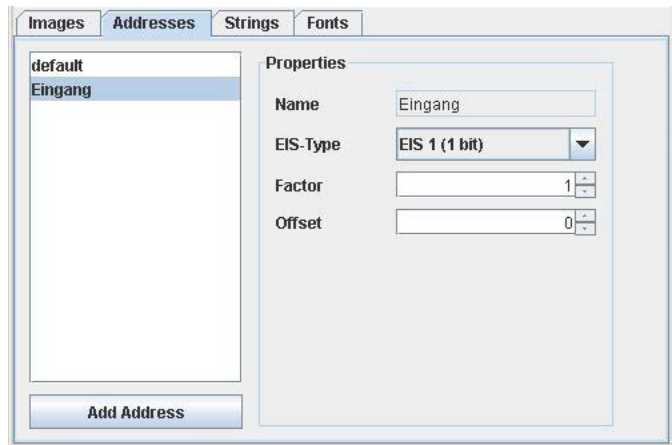


Figure 6: Adresspool

## 2.3 STRINGS

The strings can represent also values from address objects. For this purpose you have to select the address and the numbers of decimal places. With the button „insert value into string“ the value will be placed at the place of the cursor in the text.

The texts can still be changed later in the visualization editor, for example into another language.

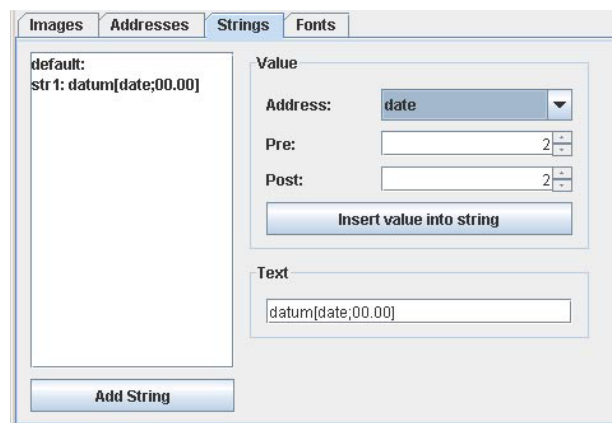


Figure 7: Strings





## 2.4 FONTS

Here you can create different fonts for the texts / character strings. The preview shows the currently font in the indicated size and style (bold / italic). It is recommended mainly usual fonts to use so that the visualization looks on different operating systems same.

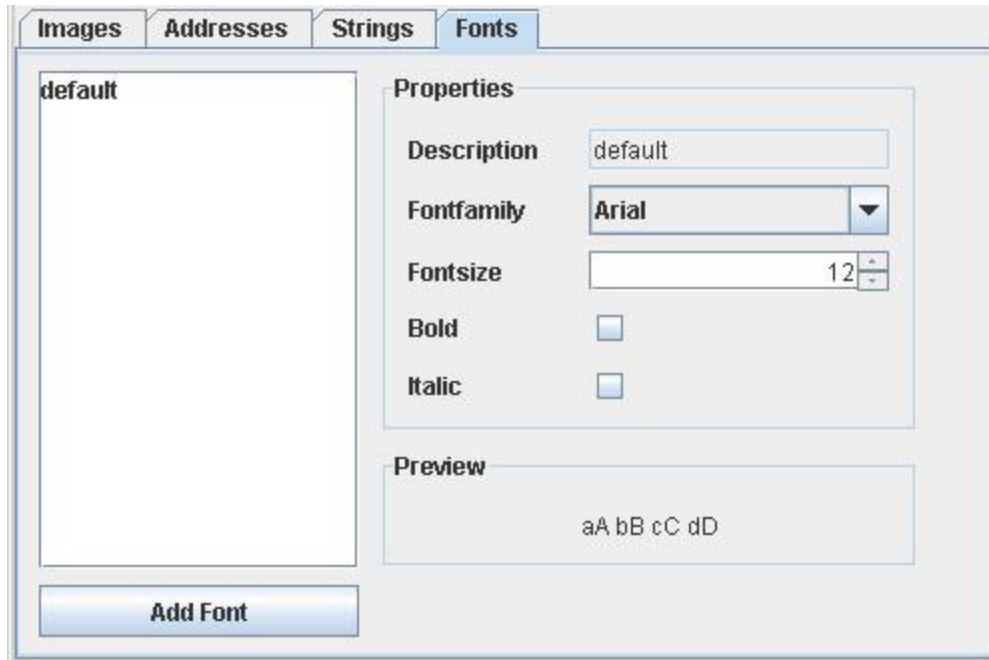


Figure 8:Fonts

## 3 BACKGROUND & LETTERING

The representation of all elements can be defined concerning the background and the lettering.



### 3.1 BACKGROUND



Figure 9: Background

#### BACKGROUND TYP

**Transparent:**

the segment is represented transparently. Elements, that lie in the visualization behind the panel or the side background then are visible

**Color :**

a background color can be chosen from the color palettes.

**graphic :**

a graphic of the image pool (JPG oder GIF) can be chosen as background.

#### COLOR

Clicking on the button „Choose Color“ and choose a color. Only available, if color as background type was chosen.

#### GRAFIC

Click on the arrow and choose a picture from the menu or click on the plus signum and choose a picture from the hard disk. There are all graphics in the menu from the data pool. This function is only available if as background type graphic was chosen.

#### TEXT SELECTION

Here you can select text and font for the lettering. The different character strings and fonts can be defined in the data pool.

**Text**

Click on the arrow and choose an already created text, which was created in the data pool/Strings.

**Font**

Click on the arrow and choose an already defined font from the data pool/fonts.

**Text color**

Click on the button and choose a color.

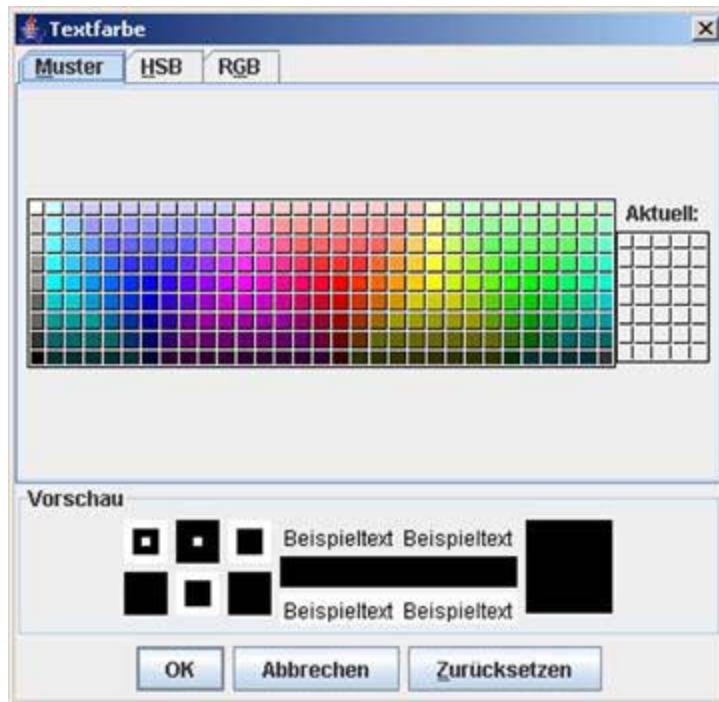


Figure 10: Selection window for the text color

## 4 ELEMENTS

### 4.1 STATIC ELEMENT

On the one hand static elements are used for the graphic design of operating panels. So for example very much narrow static elements can shape a frame around an element or be used as optical separating-beams between different active elements. With the background type transparent the background of the visualization page are visible. Also graphics and pictures can be fit. On the other hand static elements can be used as lettering fields.



#### 4.1.1 DEFINING STATIC ELEMENT

Click into a segment and activate the element type Static Element. The parameters background and text selection can be defined. Read for this purpose the section „background & lettering.

**Important**

**Click into a segment and activate the element type Static Element. The parameters background and text selection can be defined. Read for this purpose the section „background & lettering.**

### 4.2 INDICATOR ELEMENT

Indicator panels are used for the signaling of states and the advertisement of text and values (for example temperatures). States can be signaled through colors, graphics and texts with values. The representation of an indicator panel is determined about rules. Rules can be defined for certain states (for example ON) and threshold values (for example larger 20).



#### 4.2.1 ANZEIGEELEMENT DEFINIEREN

Click into a segment and activate the element type indicator panel

**Important:**

**Click after changing the configuration on the takeover button (Accept) at the lower window border. Otherwise the changes are not taken over.**

#### 4.2.2 CONFIGURING RULES

About rules is defined, which representation for a segment at which values is valid. For every rule a representation for the respective segment set aside. If a rule is fulfilled, the segment accepts this representation. You can define rules for certain values (1; 2; 10; 2,25), for threshold values (< 20; >2,5) and for ranges of values.

##### RULE „DEFAULT“

This rule is valid if no other rule is fulfilled. This rule can be configured but it can not be deleted.

##### EDIT

A click onto a rule in the editing column opens the parameter window and you can edit the parameters of the rule.



## DELETE

A click onto a rule in the Delete column deletes the rule.

## AS NEW EDIT

A click onto a rule in the column as new edit creates a new rule on basis of the existing rule.

## NEW RULE

Above the button new rule you can define a new or wider rules.



Figure 11: Indicator element configuring rules

## BASIC SETTINGS

With a click into the value field the rule settings will be opened. In the rule selection is an extensive selection of conditions available. The rule definition in the lower part of the window is adapted to the chosen rule format.

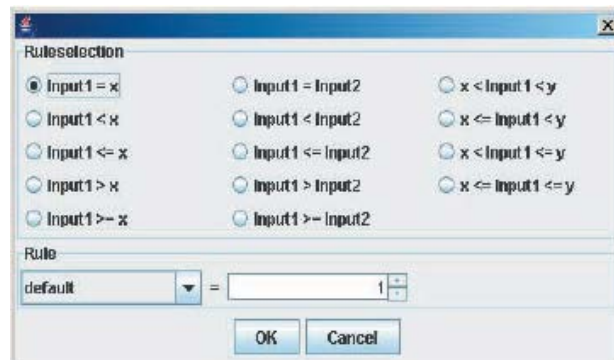


Figure 12: Rule defining

For the definition of a rule an address must be selected. The selection of the available addresses (all addresses contained in the data pool) is proved with a click onto the arrow. In the right field you have to indicated the corresponding values for the rule. The following figure shows an example.

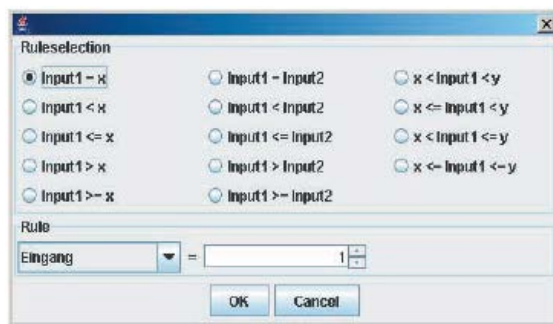


Figure 13: Rule defining

Click on “OK” to use the rule.

The attitudes for background and text selection are described in the chapter „background & lettering. The new rule is taken over about a click at the storage button.

## SHOW RULE

In the menu „show rule“ under the rule editor all defined rules are listed. The representation of the chosen rule is indicated in the editor. So it is possible to check the different representations of the rules.

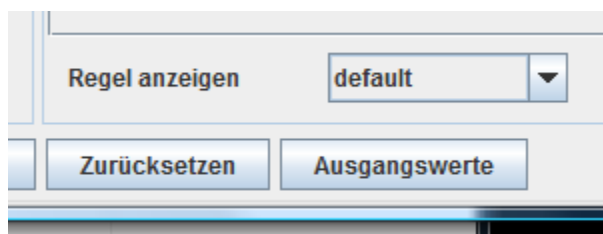


Figure 14: Rule defining

### **Important:**

**Click after changing the configuration on the takeover button (Accept) at the lower window border. Otherwise the changes are not taken over.**

## PRIORITY OF RULES

If several rules are simultaneously fulfilled, the rule with the highest priority is valid. The definition of the priority:

1. Fixed comparisons (input1 = x)
2. Ranges of values ( $x < \text{input1} > y$ )
3. larger / smaller (input1 < x)

If the priority is identical, then the rule is weighted about a ranking.

- at ranges of values the rule has the higher ranking, that define the narrower value range.
- At larger / smaller - ranges the rule, their difference to the value on Input1 is the smallest has the higher ranking.

If also the ranking of several rules should be identical, the upper rule of the list is used so.



## 4.3 CONTROL ELEMENT SIMPLE

With the control element simply can be constructed buttons and push buttons. At the pressing and releasing of an element can be sent a value. The representation of a simple control element is definable for the states standard, Mouseover (when the mouse pointer points at the element) and Mouse pressed

### DEFINING CONTROL ELEMENT SIMPLE

Click into a segment and activate the element type control element simple.

**Important:**

**Click after changing the configuration on the takeover button (Accept) at the lower window border. Otherwise the changes are not taken over.**

Elementtyp	
<input type="radio"/>	Statisches Element
<input type="radio"/>	Anzeigeelement
<input checked="" type="radio"/>	Bedienelement einfach
<input type="radio"/>	Bedienelement komplex

### 4.3.1 BASIS CONFIGURATION

Figure 15 Basic settings

## PRESS

Here is determined which value is sent when the segment is press. These can be specific or calculated values. A click onto the field „on press” opens a selection of the possibilities.



Figure 16: Component Builder – rules

The selection of the available addresses (all in the data pool) is in the lower part. The shown example (above) sends at every pressing of the control element a „1” onto the address „Ausgang”. Also can be send the differences or the sum of one address (input) and a fixed value x about the adress „Ausgang”.

## RELEASE

Here is determined which value is sent when the segment is release. These can be specific or calculated values, the settings occur on the same kind and manner as at the pressing. Together with these two functions can create for example a push button , that sends a „1” at pressing and as soon as it is let loosely again a „0”.

## APPEARANCE

The representations can be defined for the three states. So that the representation can be changed, the option must be activated.

## STANDARD

These attitudes of background and text selection are valid for the representation in the normal state.

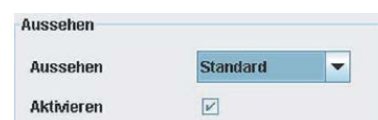
## MOUSEOVER

This representation becomes visible in the visualization while running over the control element with the mouse pointer. For example the current value / state can be shown in the form of a character string.

## MOUSE PRESSED

This representation is valid if the element is controlled.

For the parameterization of background and text selection you read the chapter „background & lettering”.



**Important:**  
**Click after changing the configuration on the takeover button (Accept) at the lower window border. Otherwise the changes are not taken over.**





## 4.4 CONTROL ELEMENT COMPLEX

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With this element can be realized complex control panels. These control element is a combination of one indicator- and a simple control element. It is an entry-dependent control element. In this way for example can be constructed a jalousie button that in the case of wind alarm his function deactivates . Rules determines which values are sent while working and designates the representation of the element.

### DEFINING CONTROL ELEMENT KOMPLEX

---

Click into a segment and activate the element type control element complex .

#### **Important:**

**Click after changing the configuration on the takeover button (Accept) at the lower window border. Otherwise the changes are not taken over.**

### CONFIGURATION

---

The configuration of the control element complex is a combination of the configurations other elements and is done in the same way.

The configuration and the defining of the rules occurred as at the indicator panel, see chapter „indicator element”. For the configuration of the operating functions see chapter „control element simple”.

### SUPPLEMENT TO THE COMPLEX CONTROL ELEMENT

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The complex control element has an additional parameter.

### VALUE RETAINED

---

When set, the current rule is valid also then if between the pressing and the releasing of the mouse button the input value is changed.

## 5 SAVING A PANEL

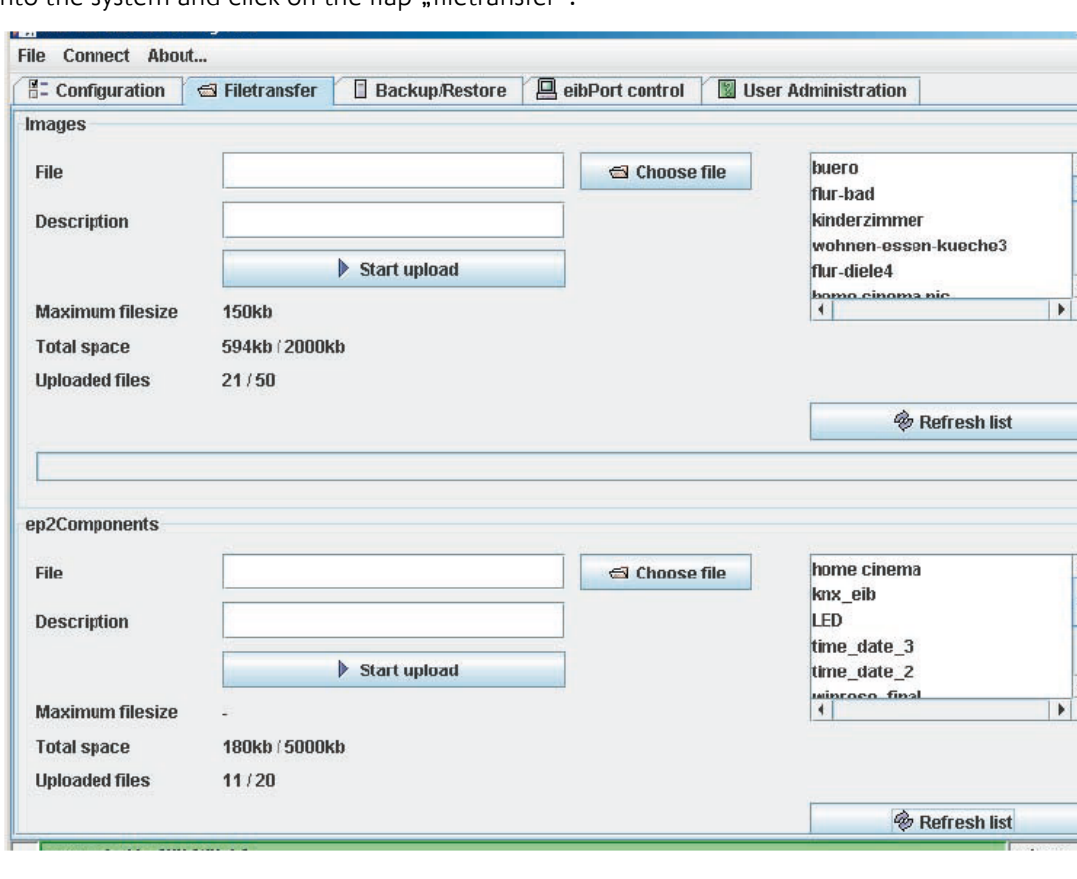
According to the configuration the project has to stored. Choose the storage entry from the file menu and give a name to the panel.

## 6 USING COMPONENTS

In order to be able to use the self constructed buttons and indicator in the visualization, these must be stored and loaded into the eibPort.

### 6.1 UPLOADING

The stored components can be loaded above the configuration tool in the eibPort. Go for this purpose into the system and click on the flap „filetransfer“.



In the middle of the mask „ep2Components” the stored files can be uploaded. A click onto the button „Refresh list” shows the components which already uploaded into the eibPort. With the button “Choose file” you can select the corresponding path of the file. With a click onto the button „Hochladen” will be uploaded the file into the eibPort.

***Hint: The number of the components is restricted on 20 or 5000 KB.***

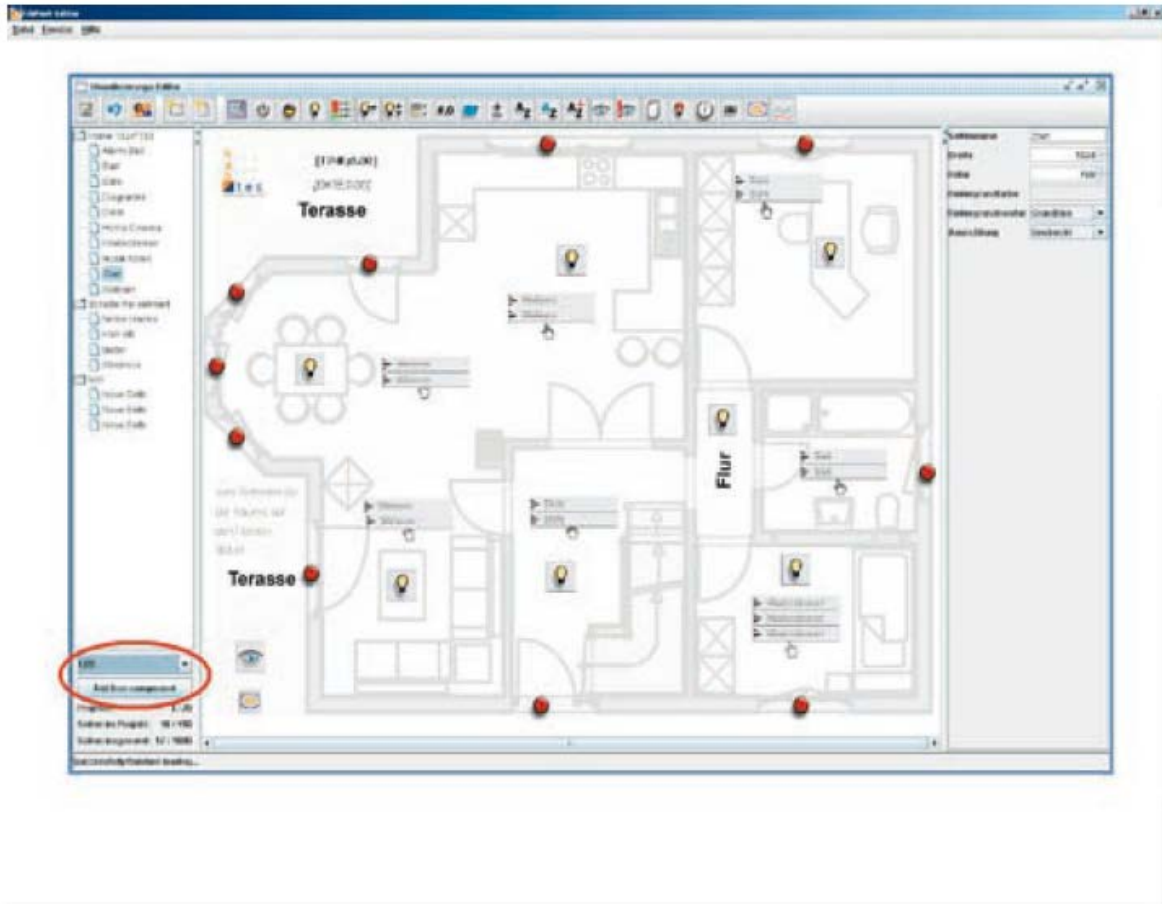
The single components can be put out over a right click .



## 6.2 INSERTION INTO VISUALISATION

With the self constructed buttons or indicators the pages of the visualization can be designed very individually.

In the left lower field of the visualization editor is the selection of all loaded components.



Above this button the component is fit into the just opened page. The positioning occurs in the same manner as at the remaining objects.

The parameter settings appear on the right side of the screen. The importance of these depends on the defined attitudes in the ComponentBuilder. Therefore is it advisable to choose for the addresses expedient descriptions and to flow the used EIS types into the description.

***Hint: If panels are subsequently worked on in the ComponentBuilder, these must be loaded again into the eibPort and parameterized again.***