Fusion

User Manual

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1. General information

Notice

If you have any questions, suggestions, or comments about this documentation, please send them via email to documentation.stream@qvest.com.

1.1 About this document

This user manual is intended for both new and advanced users of the Fusion software. It explains the underlying bricking concept, describes how Fusion Designer and Editor work, as well as common workflows when using Fusion.

1.2 About Fusion

Fusion is a so-called "bricking" software that serves as middleware between a newsroom computer system (NRCS) and a studio automation system (e.g. Viz Mosart). Bricks make complex technical workflows intuitively available to editors. They are executed by the studio automation system and should already be available during the planning stage for stories and shows. Fusion provides users with the **Fusion Designer** and **Fusion Editor** modules to manage bricks.

As a bricking solution, Fusion makes it easier for users to design stories in a technically correct way. Stories are no longer seen as a collection of control elements, but as a composition of video and audio content. Users know which visual and audio devices are available to them and what their capabilities are, but they do not need to know how to control or operate the devices.

This approach is instrumental in specifying information about the flow of a story in the NRCS and Fusion. As a result, users get a system that makes it easy to describe what and where something should be seen and heard during a show.

1.3 System architecture

Fusion is a vendor-independent middleware designed according to the principles of a service-oriented architecture. The system can be deployed across diverse platforms using appropriate technologies depending on the use case. This includes:

- On-prem/bare-metal (physical server)
- Virtualized (virtual machine)
- Cloud (hosted at a public or private cloud provider as a Kubernetes environment)

Fusion consists of the following main components:

- Fusion API (backend component for providing the main functions of Fusion)
- Fusion Database (backend component for storing the data managed by Fusion)
- Fusion Designer user interface (enables superusers to manage bricks)
- Fusion Editor user interface (enables editors to edit bricks directly from an NRCS)

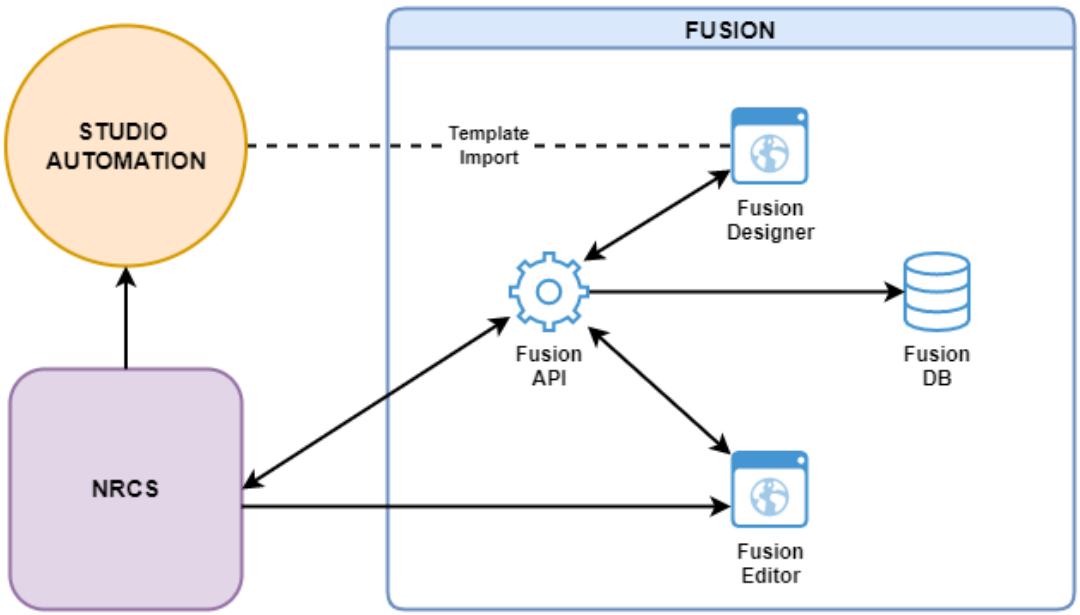

Figure: Fusion system architecture

This user manual describes the Fusion Designer and Fusion Editor modules, which can be used to create and manage bricks and assign them to stories in the used NRCS.

2. Fusion API

2.1 Overview

The Fusion API is the main backend component of the system. It provides key functionality to the other modules of the system and serves as an interface between the Fusion user interfaces (Designer and Editor) and the Fusion database.

The functions provided by the Fusion API include:

- managing bricks
- managing brick-specific rules
- managing media objects
- managing templates

3. Fusion Designer

3.1 Overview

Fusion Designer provides a user interface for creating and managing bricks. In addition, it can be used to manage all the elements that make up bricks or are related to them. These include:

- brick types (e.g. moderation, VTR, opening, etc.)
- show types (e.g. news)
- directives (rules/contents of bricks)
- multimedia objects (e.g. clip, insert, camera, etc.)
- playback locations (studio devices to be used)
- visual entries/exits (transitions between stories, allowing validation of the brick order)
- templates and packages (single or multiple instructions combined into packages to control a studio automation).

Among the other functions of Fusion Designer is the so-called "re-bricking", which refers to exchanging the brick that is assigned to a story.

3.1.1 Terminology and concepts

Brick

A brick essentially represents a collection of rules (directives) that define which devices or elements of a studio automation are available in the NRCS as part of a story. For users, this makes it clear what must be defined in terms of studio automation in the story, what is forbidden or, for example, what the current working position should basically look like (represented in the Fusion user interfaces by a corresponding icon image). For studios and live scenes it mainly describes which camera and microphone will be used for the studio scene.

Bricks are created using Fusion Designer and are then assigned to a story using Fusion Editor. A brick can contain either a single or multiple templates to control the studio automation. In addition, a brick contains other information, such as assignment to a brick type and to a show type.

Brick type

In addition to the general categorization of bricks, brick types serve the following functions:

1. They provide general information about the design type of a story.
2. They allow filtering of brick definitions that might be relevant for a story.

Compared to the story types commonly used in an NRCS, the brick type is more precise and better categorizes the technical context of the story.

The following brick types are predefined by default in Fusion:

- **External source** - when using external sources
- **VTR** - for classic contributions (incl. voice-over)
- **Break** - everything that has to do with jingles, opening credits, closing credits, etc.
- **Studio** - complex studio situations such as guest, VB graphics, wall animations or tracking shots
- **Moderation** - for classic on and off moderation (with or without background)

The list of existing brick types can be modified and extended.

Show type

The show type defines the type of a show from the point of view of the show design or technical design. For bricking, the show type is the first criteria of filtering to categorize the different brick definitions.

Multimedia object

Users can use multimedia objects to select which types of media they need for each position or directive. A multimedia object can be assigned to a brick as part of a directive.

Fusion distinguishes between the following categories and types of multimedia objects:

Category	Type	Example
"Real" multimedia object	Clip	Clips from the production content management system (PCMS)
	Graphics	Graphics from the connected graphics system (e.g. lower thirds, VB graphics, wall graphics, etc.)
Directive	Live source	-
	Camera	-
	Other directives	-

Playback location

A playback location defines on which studio device a multimedia object should be played out. Playback locations can be freely defined for each brick. For each multimedia object in a story, a playback location must be specified in Fusion Editor.

Typical examples for playback locations could be:

- **C1, C2, C3** - for using a camera
- **Wall/VR** - for playing clips on the video wall in the background
- **Insert** - for displaying overlay graphics
- **Fullscreen** - for playing clips in full screen

The exact playback locations are set per multimedia object type in Fusion Designer during the creation of the brick definitions.

Default playback locations for the media must be defined in the definition of a brick. These default playback locations will be used first by Fusion when a multimedia object is re-linked in the story in the NRCS. For example, it can be defined that linked clips appear by default on the wall or in the VB.

Inserting a DON'T (a combination of forbidden media and playback location) will result in the insertion of the default playback location of the brick for the media type. If no default playback location is defined for the media type, the playback location `ignore` is inserted.

> **Notice**
>
> Multimedia objects of type directive with playback location `ignore` are not returned to the calling system (NRCS).
>
> "Real" multimedia objects (e.g. of type graphics) with playback location `ignore` are returned to the NRCS in any case.

Directive

Directives are rules that define which devices or elements of a studio automation are available within a brick and how the corresponding studio devices are to be controlled. They essentially consist of:

- priority - which elements can, must or must not be used
- multimedia object type
- playback location
- package - one or more templates to control the corresponding studio devices

Must/Can/Don't

The rules in a brick that are defined by a directive always apply to the combination of a selected multimedia object and a playback location. The following types can be distinguished:

- **DON'T** - which multimedia objects are not allowed at the selected playback location
- **MUST** - which multimedia objects must be used at the selected playback location
- **CAN** - which multimedia objects can optionally be used at the selected playback location

Bricks are intended to protect against application errors. For this reason it is possible to define elements in a brick that must be used (the "MUSTs") and which elements must not be used (the "DON'Ts"). Usually, however, only the MUSTs and the CANs are specified in the brick definitions. Everything that is defined as neither MUST nor CAN is basically forbidden by the system and is considered a DON'T.

An example definition for a "News moderation" brick might include the following directives:

- MUSTs: one graphic media wall
- CANs: inserts and clip to media wall and other graphic(s) to media wall
- DON'Ts: anything not defined as CAN, so especially graphics VB or clip VB

Placeholder

When a brick is added to a story, the bricking process puts all MUSTs as placeholders into the story (in Fusion Editor). MUSTs always consist of a combination of multimedia object type and playback location and have the following properties:

- They cannot be deleted. The system always recreates them automatically unless a combination of multimedia object and playback location has been entered that matches the MUST definition.
- They usually have their own multimedia object type and can therefore use different symbols and automation templates than the elements by which they are replaced. For example, a MUST in a "Moderation in front of media wall" brick may be defined as a placeholder for either a clip or a graphic on the wall. The placeholder is neither of type "clip" nor of type "graphic", so it has its own icon and can use automation templates that show a neutral on the wall.
- As soon as there is a combination of multimedia object and playback location in the story that matches the MUST, the MUST placeholder is no longer displayed by the bricking.
- Inserting a DON'T (combination of forbidden multimedia object and playback location) will result in inserting the default playback location of the brick for the multimedia object type. If no default playback location has been defined for the multimedia object, the playback location `x_ignore` is inserted.

The following restrictions apply to the use of placeholders:

1. Placeholders should be created in Fusion Designer as separate directives (separate multimedia objects).
2. Placeholders may only be used in a MUST group.
3. Each MUST group may have exactly one placeholder, which is marked as such via the corresponding flag in Fusion Designer.
4. A MUST group may only be created if it contains at least one directive.
5. The placeholder flag in Fusion Designer may only be applied to directives.
6. If the brick rule within a MUST group is fulfilled by a real multimedia object (clip or graphic), then the placeholder is ignored during the bricking process but returned to the NRCS with the playback location `ignore`.
7. If the brick rule within a MUST group is fulfilled by a directive, then the placeholder is ignored during bricking and is not returned to the NRCS.

Visual entry/exit

The transition checker is used to check the compatibility of the visual transitions between the stories in a show. This process can be triggered via the connected NRCS and returns the information for each transition as to whether the respective transition is compatible or not.

Transitions between stories can be defined per brick via the "visual entry" and "visual exit" options.

Re-bricking

"Re-bricking" refers to replacing the brick that is assigned to a story and can be done in the following ways:

- by manually changing the brick field in the story header
- by changing the story's brick type (in this case the default brick of the new brick type is used)
- by changing the show type of a playlist (in this case all stories of the show must be "re-bricked")

The re-bricking process includes:

- Inserting MUSTs
- Neutralizing DON'Ts
- Applying background information (visual entry and exit points) of the new brick

> **Notice**
>
> By moving or copying a story to a playlist of another show type, all previous bricking information is lost. The system will therefore provide the story with the default brick of the show type of the new playlist. Alternative playback locations of multimedia objects will also be reset to default.

Template

A (Mosart) template contains instructions for the studio automation, which can be used to control studio devices such as cameras, video mixers or video servers.

Package

Several templates can be grouped together in a package. One or more packages can be assigned to each brick via directives.

3.2 User Interface

To access the Fusion Designer user interface, open the following address in your browser:

`http://<host-name>:22000/`

Replace `<host-name>` with the name of your Fusion host.

> **Notice**
>
> The Fusion Designer user interface is optimized for Google Chrome. Use only a recent version of this browser to be able to use the full range of Fusion Designer functions.

The user interface is structured as follows:

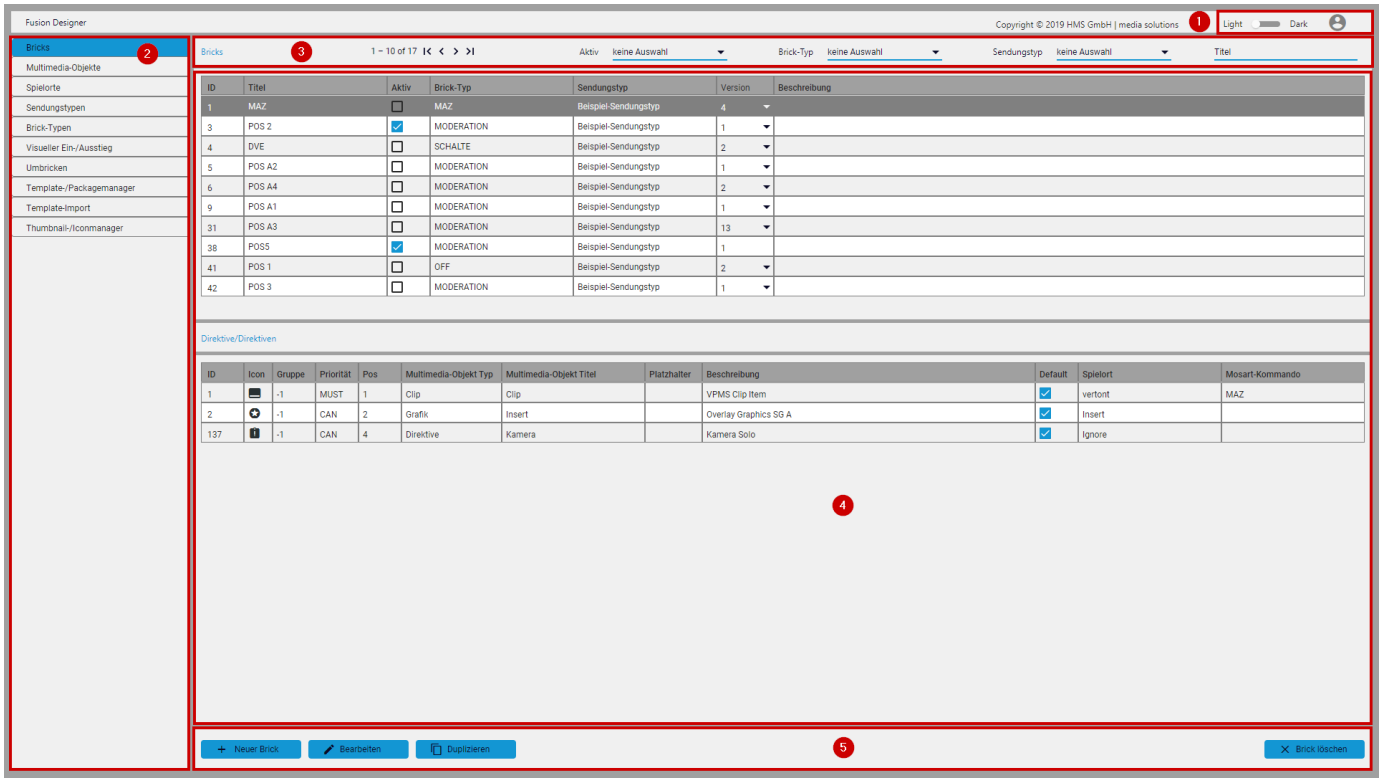

Figure: User interface

1. Switch for changing the design theme of the user interface
2. Navigation to main areas
3. Filters
4. Content of the currently selected area
5. Functions of the currently selected area

3.3 Workflows

3.3.1 Templates

Importing an automation template

With Fusion it is possible to import templates of a studio automation (e.g. Viz Mosart). These are usually available as XML files, which may contain one or more template definitions.

For example, a template for controlling a camera could consist of the following content:

```
<mosarttemplate>
  <type name="CAMERA" templateset="Regie1" category="">
    <variants fieldtype="LIST" value="1">
      <variant name="1">
        <transitions value="DEFAULT" enable="false">
          <transition name="DEFAULT">
            <field name="" value="" fieldtype="TEXT"></field>
          </transition>
          <transition name="MIX">
            <field name="transitionrate" value="0" fieldtype="NUMBER" range="0,999"></
field>
          </transition>
          <transition name="WIPE">
            <field name="transitionrate" value="0" fieldtype="NUMBER" range="0,999"></
field>
          </transition>
          <transition name="EFFECT">
            <field name="effectname" value="0" fieldtype="LIST" keylist="effects"></field>
          </transition>
        </transitions>
        <fields></fields>
      </variant>
    </variants>
    <keys name="mixerinputs">
        ...
    </keys>
    <keys name="effects">
        ...
    </keys>
    <keys name="routersources">
        ...
    </keys>
    <keys name="routerdestinations">
        ...
    </keys>
  </type>
</mosarttemplate>
```

To import a template, proceed as follows:

1. Open Fusion Designer.
2. On the left side click **Template-Import**.
3. To select the file to import, either drag and drop it into the **Template-Import** area on the right side or use the file selection dialog.

   The templates contained in the selected file are listed in the "Read templates (Eingelesene Templates)" area and the templates that already exist in the system are listed in the "Registered templates (Registrierte Templates)" area.

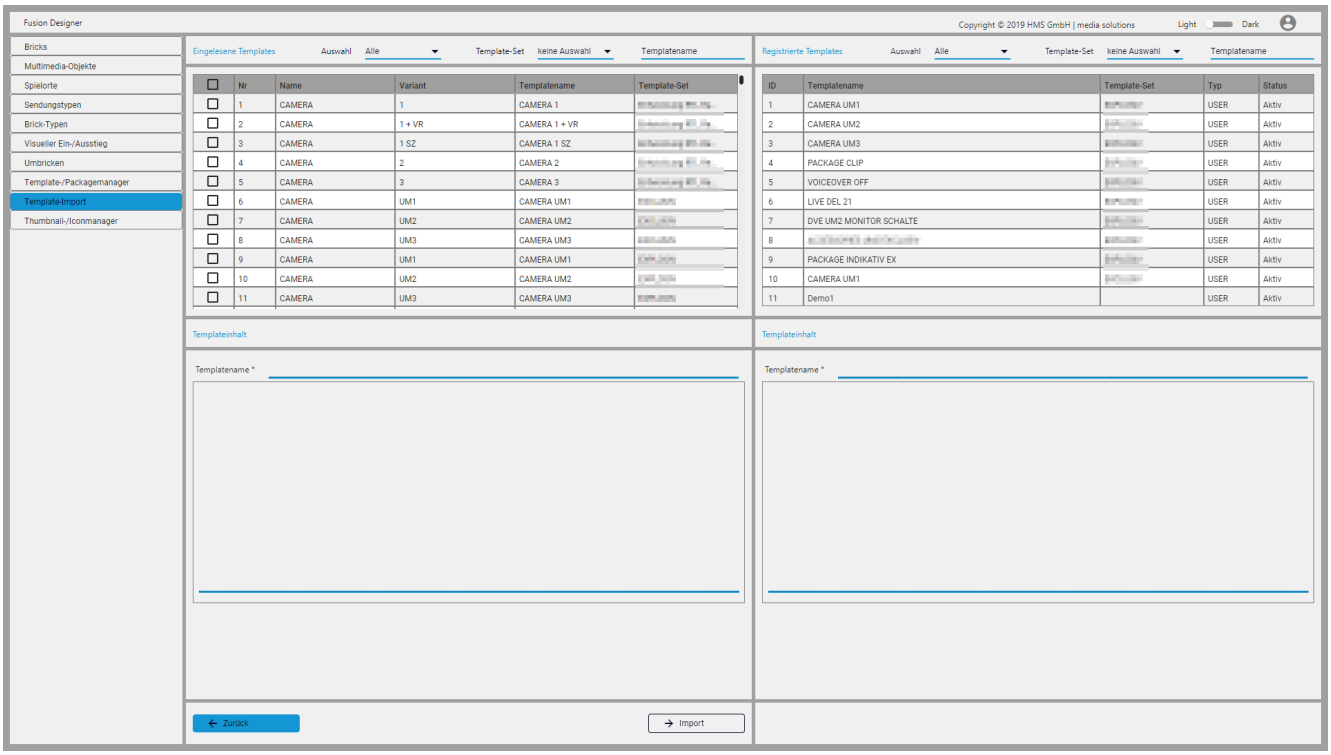

Figure: Template-Import

Tip

To display the content of a template, select the corresponding template. The content is displayed below in the "Template content (Templateinhalt)" area.

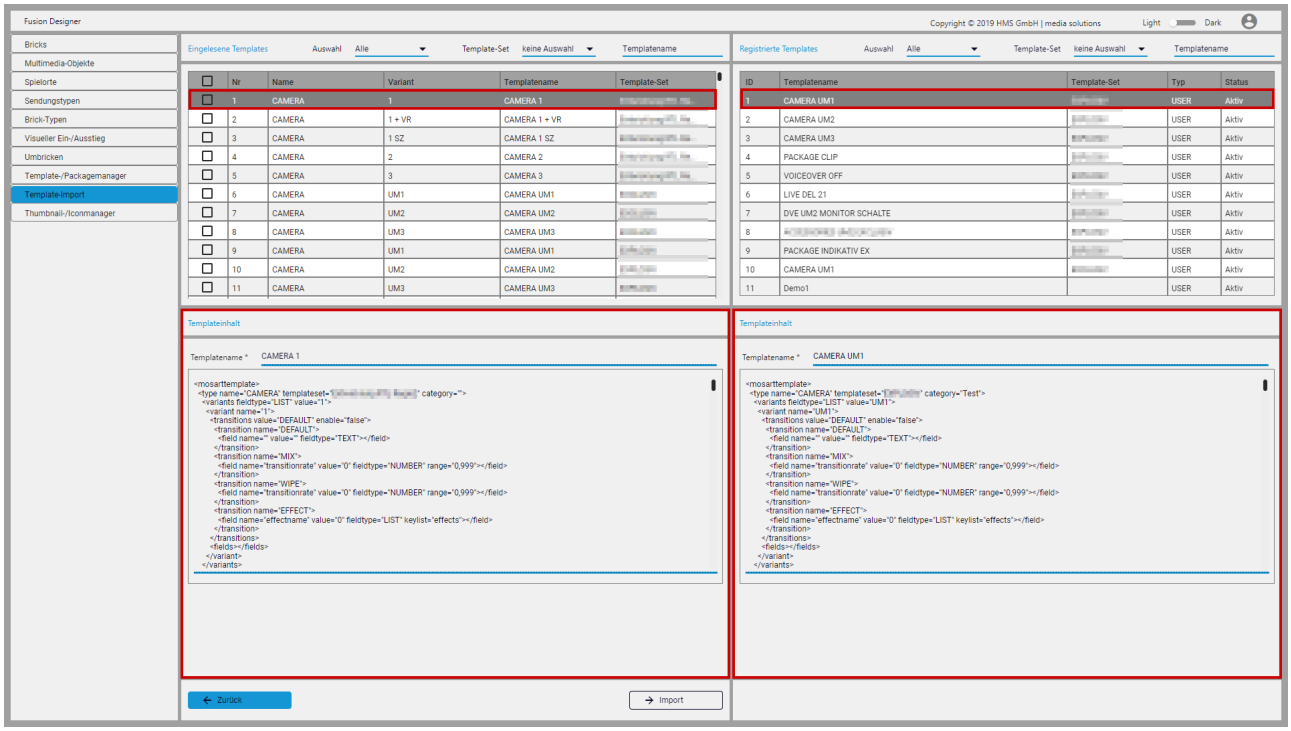

Figure: Show template contents

4. To import one or more templates, on the left side under **Read templates (Eingelesene Templates)** select the templates to be imported and click **Import**.

Notice

If a template already exists in Fusion it is overwritten when you import it again.

The selected templates are imported and are available in the system afterwards.

Managing automation templates

In addition to the import of templates of a studio automation it is possible to create and manage templates manually as well as to combine several templates into a package. For this purpose, the **Template-/Packagemanager** area is available.

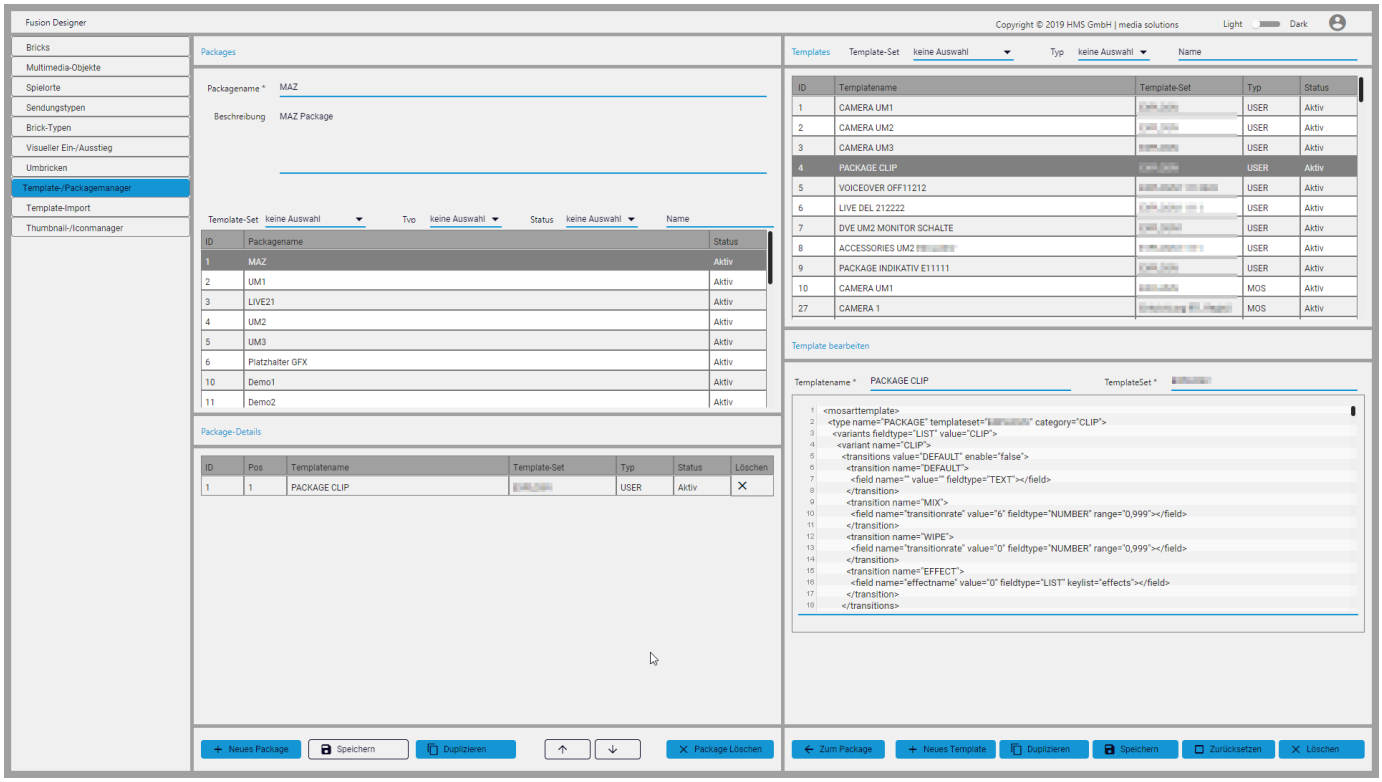

Figure: Template/package manager

TEMPLATES

Creating a new template

To create a new template, proceed as follows:

1. In the lower right area click **New template (Neues Template)**.
2. Enter a name for the template.
3. Specify the template set to be used.
4. Paste the XML code of the template into the text field below.

> **Notice**
>
> The XML structure of the inserted template is automatically checked. If an error is detected, the type of the error and the corresponding line number are displayed below the text field.

5. Click **Save (Speichern)**.

The template is saved.

Editing an existing template

> **Notice**
>
> The template status **Active (Aktiv)** means that a template is known in Fusion as well as in the connected studio automation. A template that is only present in Fusion, but no longer in the studio automation, is displayed in red. Packages that contain such a template are also displayed in red.
>
> The filter **Template-Set** provides the possibility to filter based on types/sets that originate from the studio automation.

> **Notice**
>
> Fusion distinguishes between the following template types (see column **Type (Typ)** in the list of templates):
>
> - **MOS** - templates imported from studio automation
> - **USER** - user-defined templates created with Fusion
>
> Only templates of the type **USER** can be edited.

To edit a template, proceed as follows:

1. In the list of templates click the template to be edited.

   > **Tip**
   >
   > You can use the filters above the list of templates to search for specific templates.

2. Change the name, the template set and/or the content of the template.
3. Click **Save (Speichern)**.

The edited template is saved.

Deleting a template

> **Notice**
>
> Only templates of type **USER** can be deleted.

To delete a template, proceed as follows.

1. Select the template to be deleted.
2. Click **Delete (Löschen)**.
3. Confirm the subsequent dialog with **Yes (Ja)**.

The template is removed from the system.

PACKAGES

Creating a new package

To create a new package, proceed as follows:

1. Click **New package (Neues Package)**.
2. Enter a name for the package.
3. (Optional) Enter a description for the package.

> **Tip**
>
> The description text can be displayed as tooltip wherever the package name is displayed (e.g. in the brick details in the list of packages as well as in the list of directives in the column "Mosart command (Mosart-Kommando)"). To do this, move the mouse pointer over the package name.

4. In the list of templates on the right select the template to be added and add it by double-clicking or by clicking **Add to package (Zum Package)**.
5. Click **Save (Speichern)**.

The package is saved.

Editing an existing package

To edit a package, proceed as follows:

1. In the **Packages** area, select the package to be edited.

> **Tip**
>
> You can use the filters above the list of packages to search for specific packages.

2. If necessary, change the name of the template.
3. If necessary, change the description of the package.

> **Tip**
>
> The description text can be displayed as tooltip wherever the package name is displayed (e.g. in the brick details in the list of packages as well as in the list of directives in the column "Mosart command (Mosart-Kommando)"). To do this, move the mouse over the package name.

4. To add templates to the package, select the corresponding template in the list on the right and click **Add to package (Zum Package)**.
5. To remove a template that has already been added, click **X** in the **Delete (Löschen)** column in the row of the template to be deleted.
6. To change the order of the added templates, click the template to be moved in the package details and use the arrow icons in the lower right area of the screen.

7. Click **Delete (Speichern)**.

The edited package is saved.

Deleting a package

To delete a package, proceed as follows:

1. In the **Packages** area, select the package to be deleted.
2. Click **Delete package (Package löschen)**.
3. Confirm the subsequent dialog with **Yes (Ja)**.

The package is removed from the system.

3.3.2 Brick elements

Managing thumbnail graphics and icons

Fusion Designer provides the possibility to assign a thumbnail graphic to each brick. This is done during the editing of a brick in the brick details. It is recommended to choose a graphic that visualizes the respective purpose of the brick (e.g. a sketch that shows the setup in the studio or the used elements of the studio automation). Additionally, an icon can be assigned to each multimedia object for better differentiation.

Thumbnail graphics and icons can be managed in the **Thumbnail-/Iconmanager** area, which provides the following functions:

- calling an external upload page for uploading new thumbnail graphics and icons
- providing a selection of icons available for marking multimedia objects
- deleting thumbnail graphics and icons

Notice

Fusion Designer does not provide its own thumbnail graphics by default. These must be provided and uploaded to the system by users.

Fusion Designer provides a standard package of icons that can be extended as required. Additional icons must be provided and uploaded to the system by users.

Notice

Fusion does not provide its own component for uploading graphics to the system. However, a configurable link can be used to open an external website where the corresponding files can be uploaded. This is usually a web page that provides HTTP upload functionality of files to a custom storage system. The target directories used for the upload (one each for thumbnail graphics and icons) are configurable and monitored by Fusion so that all newly uploaded files are automatically detected and registered in the system.

MANAGING THUMBNAIL GRAPHICS

Thumbnail graphics can be managed in the **Thumbnail-/Iconmanager** area if the **Thumbnail** entry is selected as **Type (Typ)** in the list of filters.

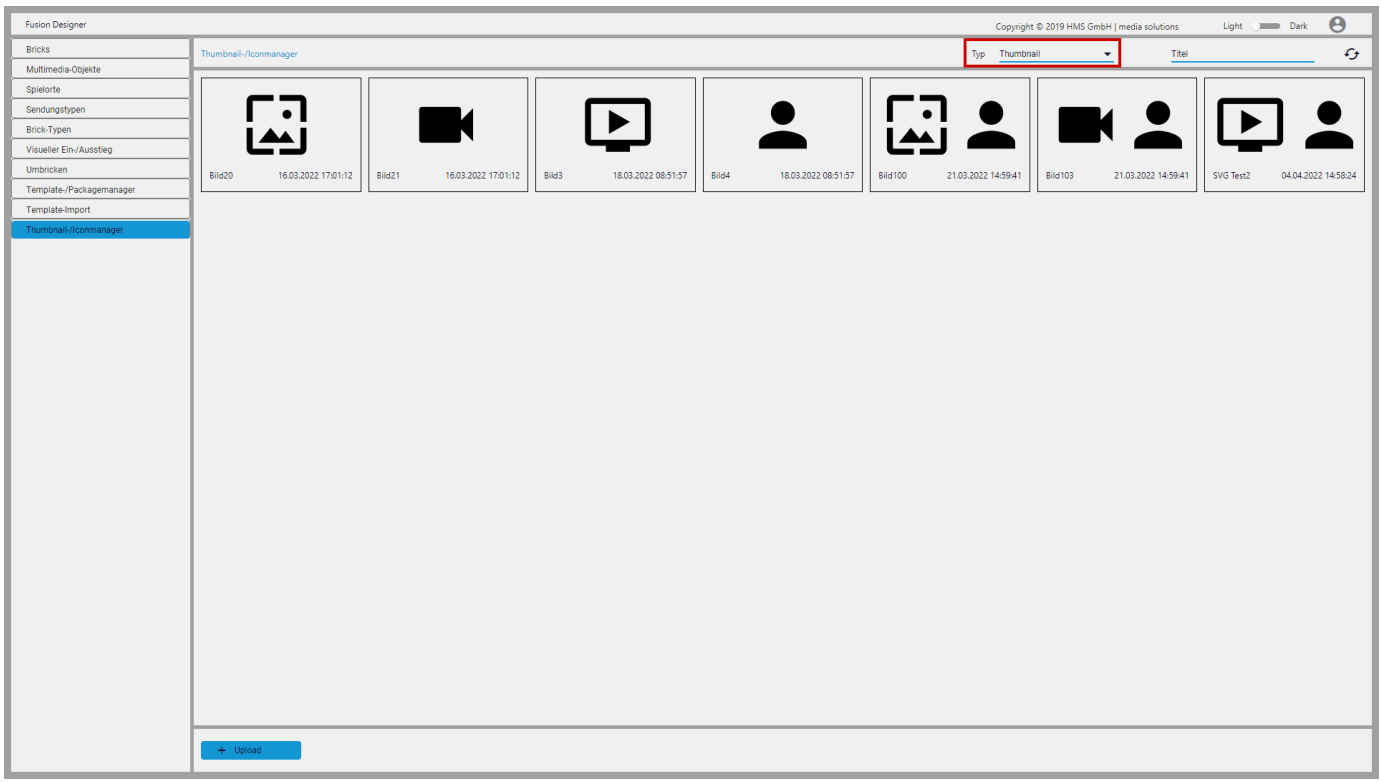

Figure: Overview of available thumbnail graphics

Uploading a thumbnail graphic

To upload a new thumbnail graphic, proceed as follows:

1. Select the **Thumbnail-/Iconmanager** area.

   An overview of all available thumbnail graphics is displayed.

2. Click **Upload**.

   The external upload page (that is stored as a link in the system) opens.

3. Use the external upload page to upload thumbnail graphics to the corresponding target directory.

> **Notice**
>
> Fusion supports the following file formats for thumbnail graphics:
>
> - PNG
> - SVG
> - JPEG
> - GIF
> - BMP

Newly uploaded files are automatically recognized by Fusion and registered in the system. Depending on the destination directory they are uploaded to, they are either available as thumbnail graphics or icons.

Deleting a thumbnail graphic

To delete a thumbnail graphic, proceed as follows:

1. Select the **Thumbnail-/Iconmanager** area.

   An overview of all available thumbnail graphics is displayed.

2. Select the graphic to be deleted.
3. Click **Delete (Löschen)**.
4. Confirm the dialog by clicking **Yes (Ja)**.

The selected graphic is deleted. If it was already assigned to a brick, the thumbnail graphic of the brick is reset to the default graphic.

MANAGING ICONS

Fusion Designer comes with a standard set of icons that can be extended as desired. Additional icons must be provided and uploaded to the system by users.

Users can select from all available icons. The selected icons can be assigned to multimedia objects to better distinguish them.

Icons can be managed in the **Thumbnail-/Iconmanager** area if **Icon** is selected as **Type (Typ)** in the list of filters.

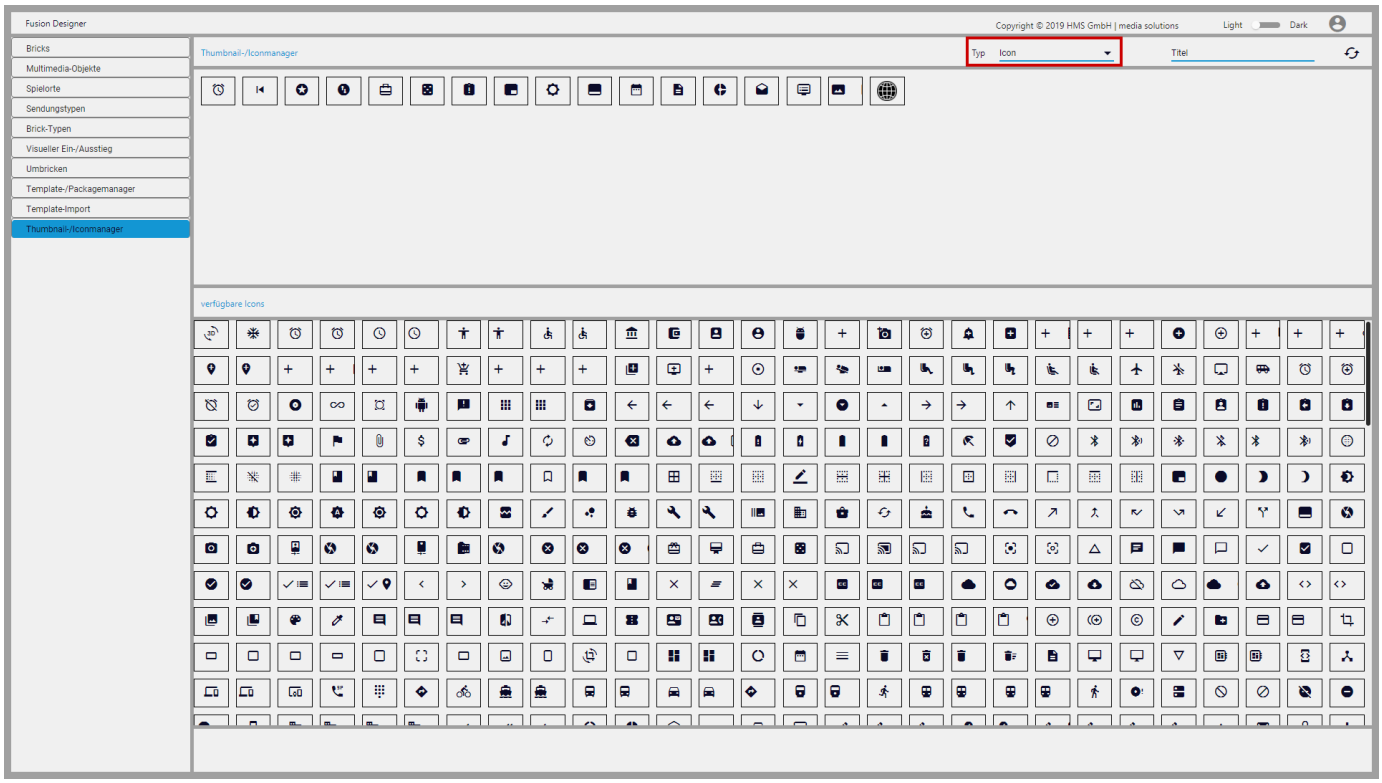

Figure: Overview of available icons

Uploading an icon

To upload a new icon, proceed as follows:

1. Select the **Thumbnail-/Iconmanager** area.

   An overview of all available thumbnail graphics is displayed.

2. Click **Upload**.

   The external upload page (that is stored as a link in the system) opens.

3. Use the external upload page to upload icons to the corresponding target directory.

> **Notice**
>
> The following file formats are supported by Fusion:
>
> - PNG
> - SVG
> - JPEG
> - GIF
> - BMP

Newly uploaded files are automatically recognized by Fusion and registered in the system. Depending on the destination directory they are uploaded to, they are either available as thumbnail graphics or icons.

Create a selection of icons

To create a selection of icons that can then be assigned to multimedia objects, proceed as follows:

1. Select the **Thumbnail/Iconmanager** area.

   An overview of all available thumbnail graphics is displayed.

2. In the upper right of the list of filters, select **Icon** as **Type (Typ)**.

   An overview of all available icons is displayed, in the upper area the current selection and in the lower area all available icons.

3. To add an icon to the selection, select it in the lower area and click **Add (Hinzufügen)**.

The selected icon is added to the selection and can then be assigned to multimedia objects.

Managing multimedia objects

In the **Multimedia objects (Multimedia-Objekte)** area you can define the available types of multimedia objects.

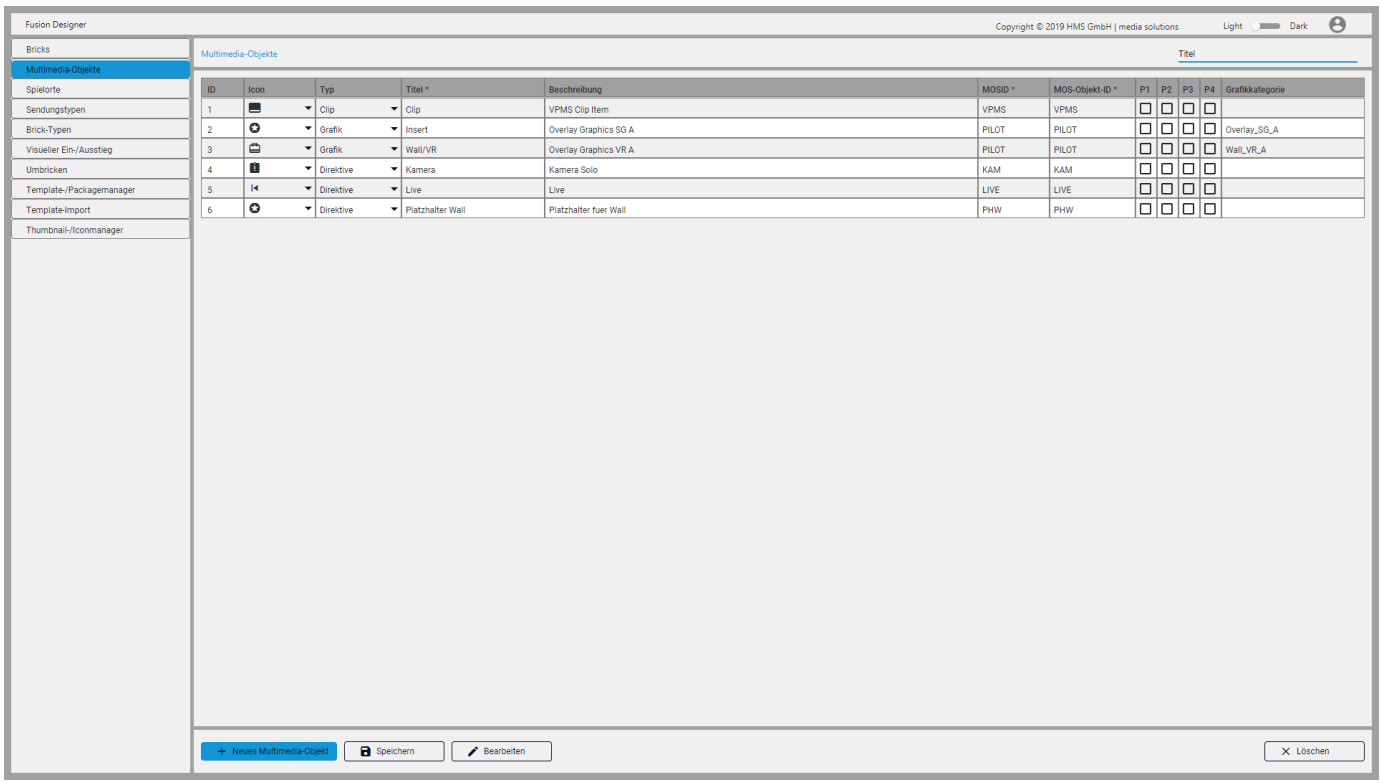

Figure: Multimedia objects

CREATING A NEW MULTIMEDIA OBJECT

To create a new multimedia object, proceed as follows:

1. Click **New multimedia object (Neues Multimedia-Objekt)**.
2. Enter a title and optionally other properties. Fill in all mandatory fields or columns marked with an asterisk.

> **Notice**
>
> Make sure that the multimedia object is named correctly. This applies in particular to multimedia objects of type **Graphics (Grafik)** because a connected graphics system (e.g. Viz Pilot) may identify and play out graphics based on the used title.

3. Activate the parameters (P1, P2, P3 and/or P4) that are to be edited or filled in later in Fusion Editor.
4. Click **Save (Speichern)**.

EDITING AN EXISTING MULTIMEDIA OBJECT

To edit a multimedia object, proceed as follows:

1. Select the multimedia object to be edited.
2. Click **Edit (Bearbeiten)**.
3. Change the properties of the multimedia object.

4. Click **Save (Speichern)**.

DELETING AN EXISTING MULTIMEDIA OBJECT

To delete a multimedia object, proceed as follows.

1. Select the multimedia object to be deleted.
2. Click **Delete (Löschen)**.
3. Confirm the subsequent dialog with **Yes (Ja)**.

Managing playback locations

In the **Playback locations (Spielorte)** area you can define which studio devices are available to play media objects.

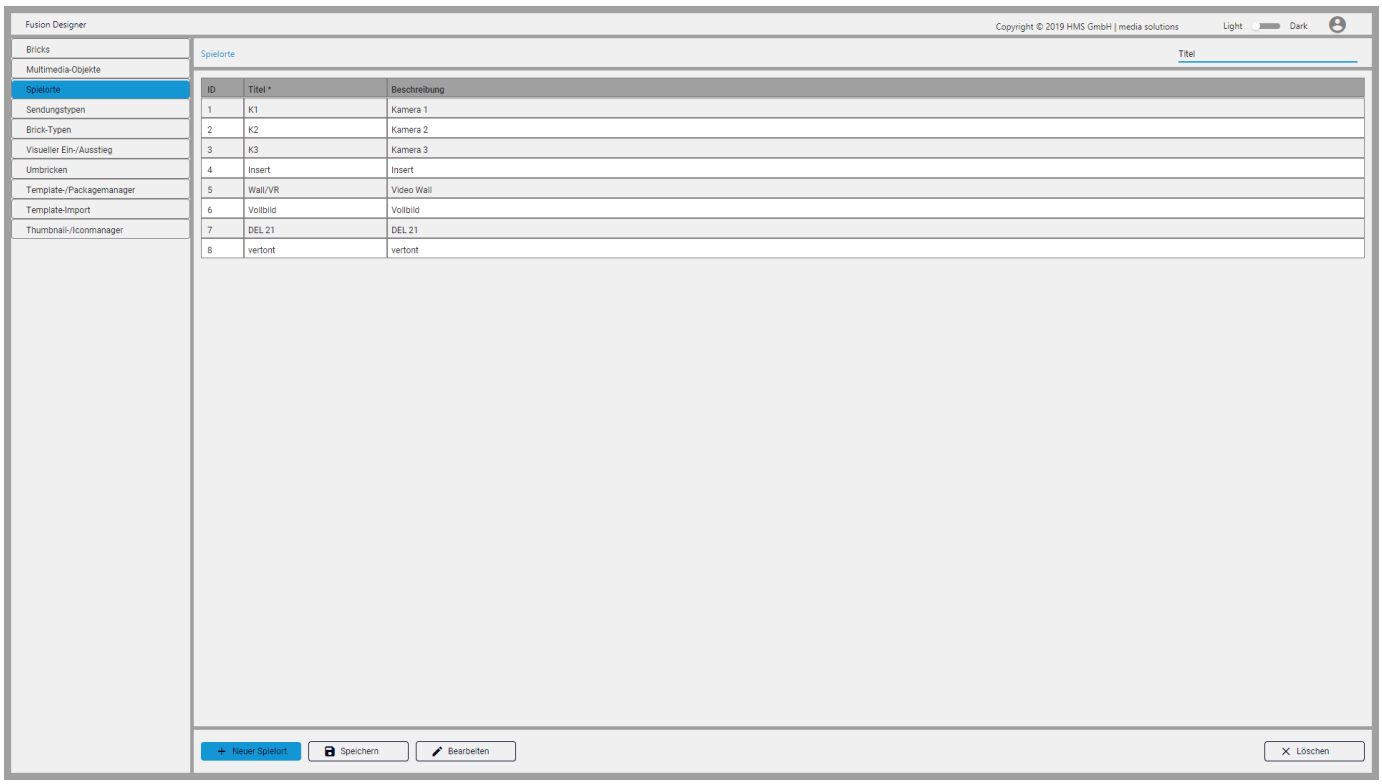

Figure: Playback locations

CREATING A NEW PLAYBACK LOCATION

To create a new playback location, proceed as follows:

1. Click **New playback location (Neuer Spielort)**.
2. Enter a title and optionally a description.
3. Click **Save (Speichern)**.

EDITING A PLAYBACK LOCATION

To edit a playback location, proceed as follows:

1. Click the playback location to be edited.
2. Click **Edit (Bearbeiten)**.
3. Change the properties of the playback location.
4. Click **Save (Speichern)**.

DELETING A PLAYBACK LOCATION

To delete a playback location, proceed as follows:

1. Click the playback location to be deleted.
2. Click **Delete (Löschen)**.
3. Confirm the subsequent dialog with **Yes (Ja)**.

Managing show types

In the **Show types (Sendungstypen)** area you can manage show types. For each show type you can select a default brick per brick type to be used by default.

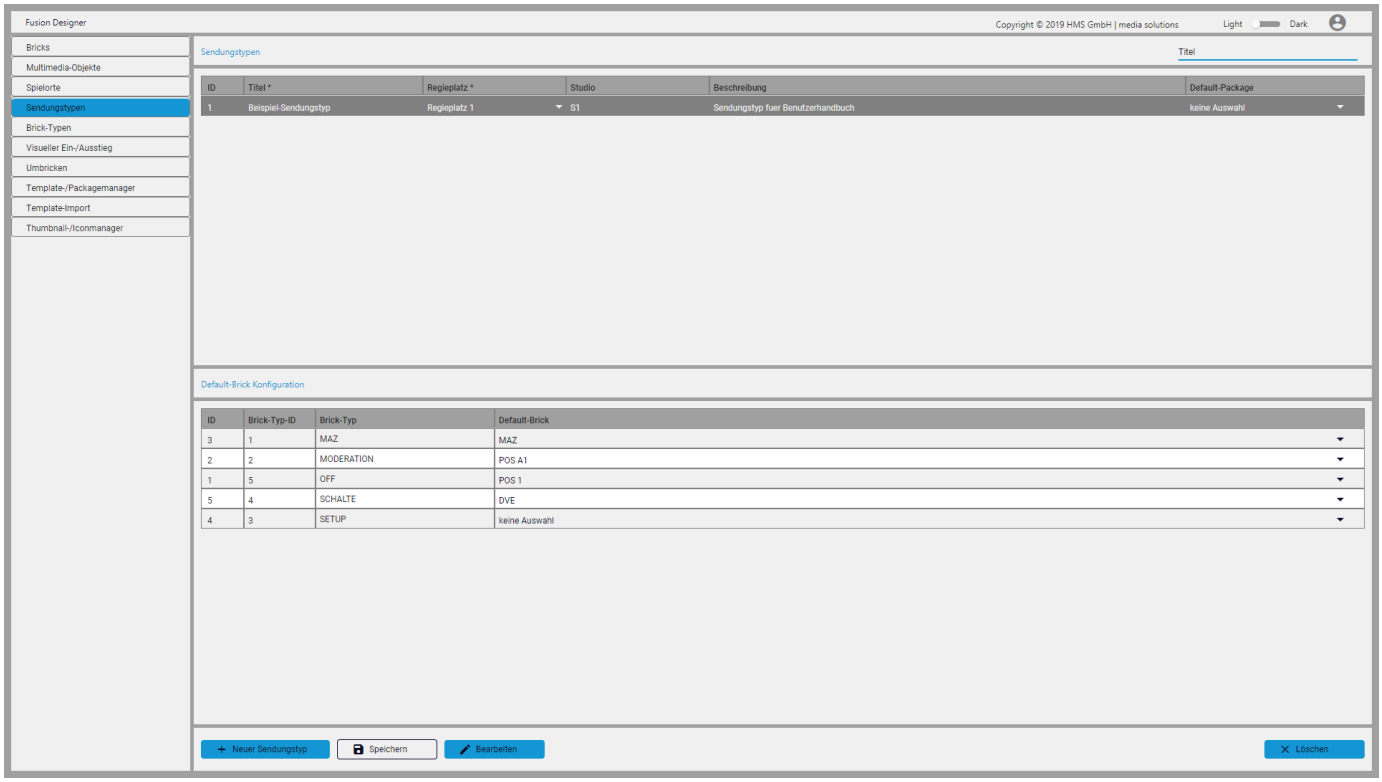

Figure: Show types

CREATING A NEW SHOW TYPE

To create a new show type, proceed as follows:

1. Click **New show type (Neuer Sendungstyp)**.
2. In the **Show types (Sendungstypen)** area, enter a title, select one or more director positions (Regieplatz), and optionally select studio, description, and default package.
3. Optionally, in the **Default brick configuration (Default brick Konfiguration)** area select a default brick for the available brick types.
4. Click **Save (Speichern)**.

EDITING A SHOW TYPE

To edit a show type, proceed as follows:

1. Select the show type to be edited.
2. Click **Edit (Bearbeiten)**.
3. Change the properties of the show type and/or the default brick configuration.
4. Click **Save (Speichern)**.

DELETING A SHOW TYPE

To delete a show type, proceed as follows:

1. Select the show type to be deleted.
2. Click **Delete (Löschen)**.
3. Confirm the subsequent dialog with **Yes (Ja)**.

Managing brick types

In the **Brick types (Brick-Typen)** area you can define the available brick types.

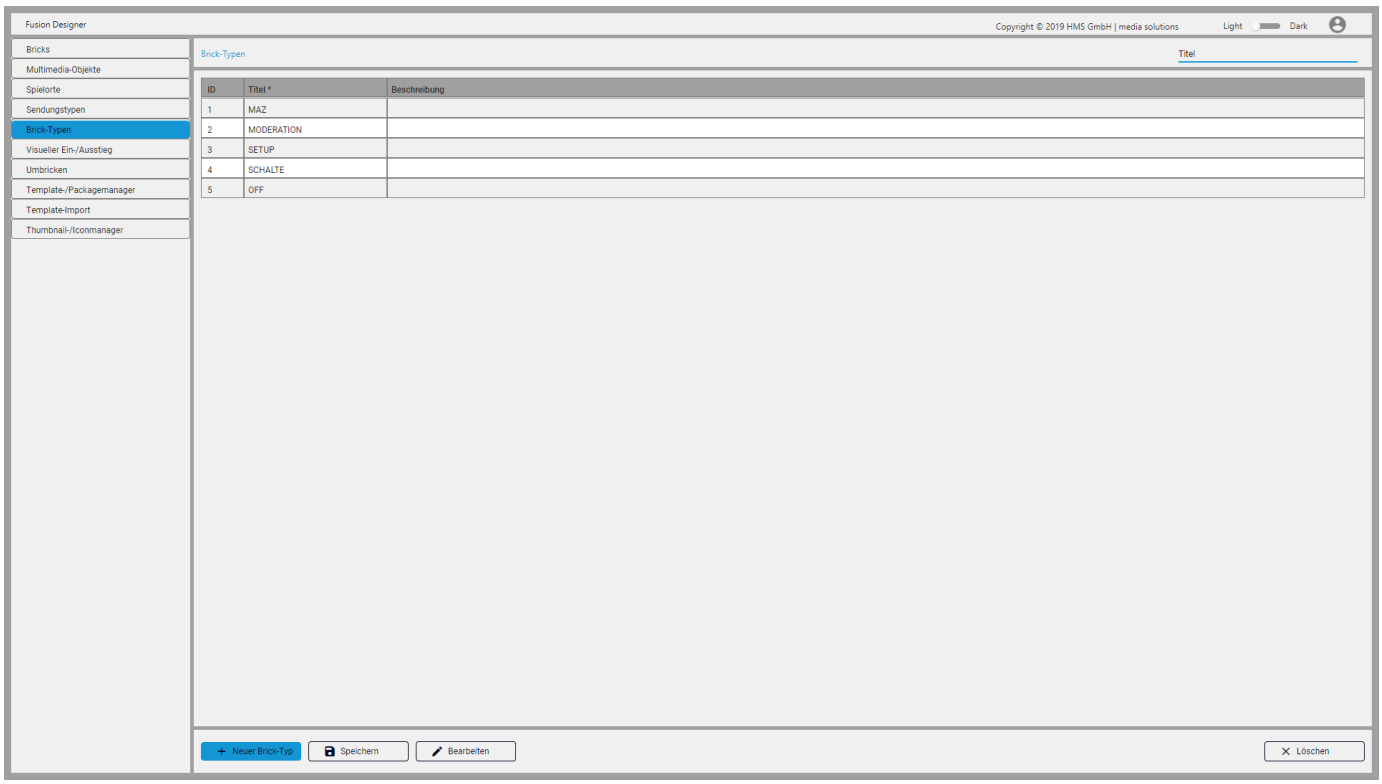

Figure: Brick types

CREATING A NEW BRICK TYPE

To create a new brick type, proceed as follows:

1. Click **New brick type (Neuer Brick-Typ)**.
2. Enter a title and optionally a description.
3. Click **Save (Speichern)**.

EDITING A BRICK TYPE

To edit a brick type, proceed as follows:

1. Select the brick type to be edited.
2. Click **Edit (Bearbeiten)**.
3. Change the properties of the brick type.
4. Click **Save (Speichern)**.

DELETING A BRICK TYPE

To delete a brick type, proceed as follows.

1. Select the brick type to be deleted.
2. Click **Delete (Löschen)**.
3. Confirm the following dialog with **Yes (Ja)**.

Managing visual entries and exits

In the **Visual entries/exits (Visueller Ein-/Ausstieg)** area, you can manage visual entry and exit points. You can use these to create rules to check transitions between stories for compatibility.

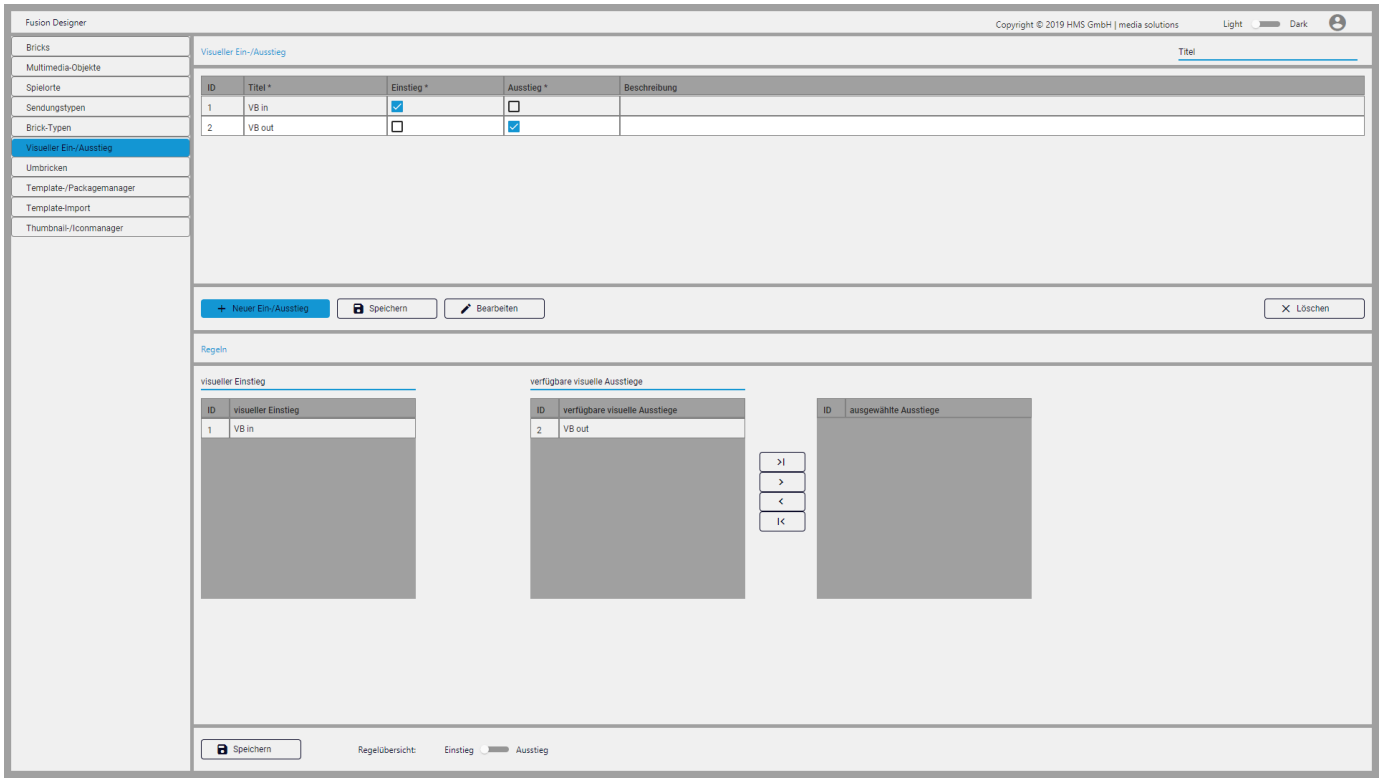

Figure: Visual entry/exit

CREATING A NEW VISUAL ENTRY/EXIT

To create a new visual entry/exit, proceed as follows:

1. Click **New entry/exit (Neuer Ein-/Ausstieg)**.
2. Enter a title, select whether it is an entry and/or exit, and optionally enter a description.
3. Click **Save (Speichern)**.

EDITING A VISUAL ENTRY/EXIT

To edit a visual entry/exit, proceed as follows:

1. Click the entry/exit to be edited.
2. Click **Edit (Bearbeiten)**.
3. Change the properties of the entry/exit.
4. Click **Save (Speichern)**.

DELETING A VISUAL ENTRY/EXIT

To delete a visual entry/exit, proceed as follows.

1. Click on the entry/exit to be deleted.
2. Click **Delete (Löschen)**.

3. Confirm the subsequent dialog with **Yes (Ja)**.

EDITING AN ENTRY RULE

To edit an entry rule, proceed as follows:

1. In the lower **Rule overview (Regelübersicht)** area, set the switch to **Entry (Einstieg)**.
2. In the **Visual entry (visueller Einstieg)** list, select the rule to be edited. Above the list is a search field that you can use to search for specific rules.
3. In the **Available visual exits (verfügbare visuelle Ausstiege)** list, select the exit to be assigned.
4. To add the exit to the **Selected exits (ausgewählte Ausstiege)** list, either double-click the exit or click the  icon.
5. To alternatively add all available exits, click the  icon.
6. To remove one or more exits from the **Selected exits (ausgewählte Ausstiege)** list, select the exit to be removed and use the other two arrow icons.
7. Click **Save (Speichern)** below the rules.

EDITING AN EXIT RULE

To edit an exit rule, proceed as follows:

1. In the **Rule overview (Regelübersicht)** section below, set the switch to **Exit (Ausstieg)**.
2. In the **Visual exit (visueller Ausstieg)** list, select the rule to be edited. Above the list, there is a search field that you can use to search for specific rules.
3. In the **Available visual entries (verfügbare visuelle Einstiege)** list, select the entry to be assigned.
4. To add the entry to the **Selected entries (ausgewählte Einstiege)** list, either double-click on the entry or click the  icon.
5. To alternatively add all available entries, click the  icon.
6. To remove one or more entries from the **Selected exits (ausgewählte Ausstiege)** list, select the entry in question and use the other two arrow icons.
7. Click **Save (Speichern)** below the rules.

Managing bricks

In the **Bricks** area you can create and manage bricks. It initially provides an overview of all currently available bricks:

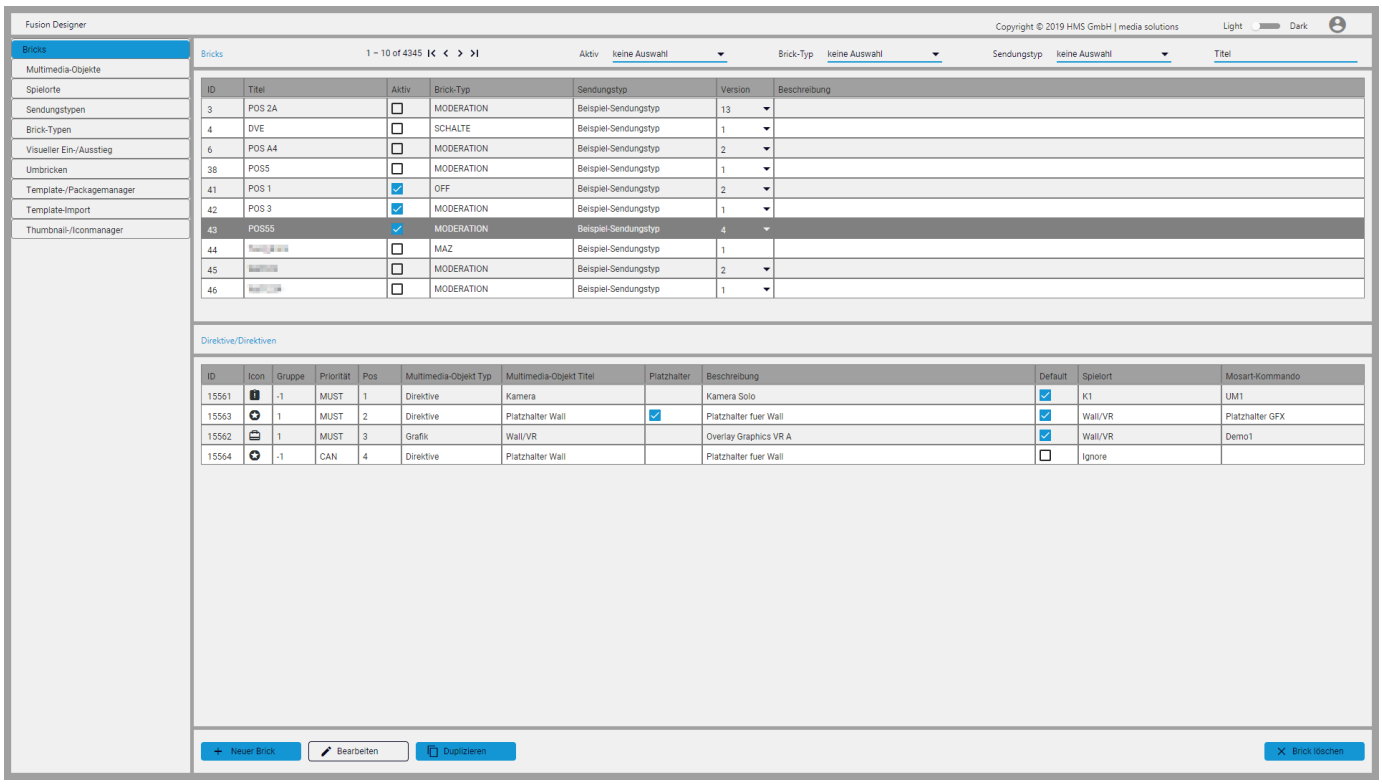

Figure: Overview of all bricks

> **Notice**
>
> The list of bricks provides paging with a maximum of ten bricks listed per page. To select a different page, use the page controls above the list of bricks.

To view details about a brick, select the corresponding brick and click **Edit (Bearbeiten)**.

> **Notice**
>
> Only disabled bricks can be edited. To edit an activated brick you must first deactivate it by unchecking the checkbox in the **Active (Aktiv)** column. Confirm the subsequent dialog by clicking **Yes (Ja)**.

After that, all details of the selected brick are displayed:

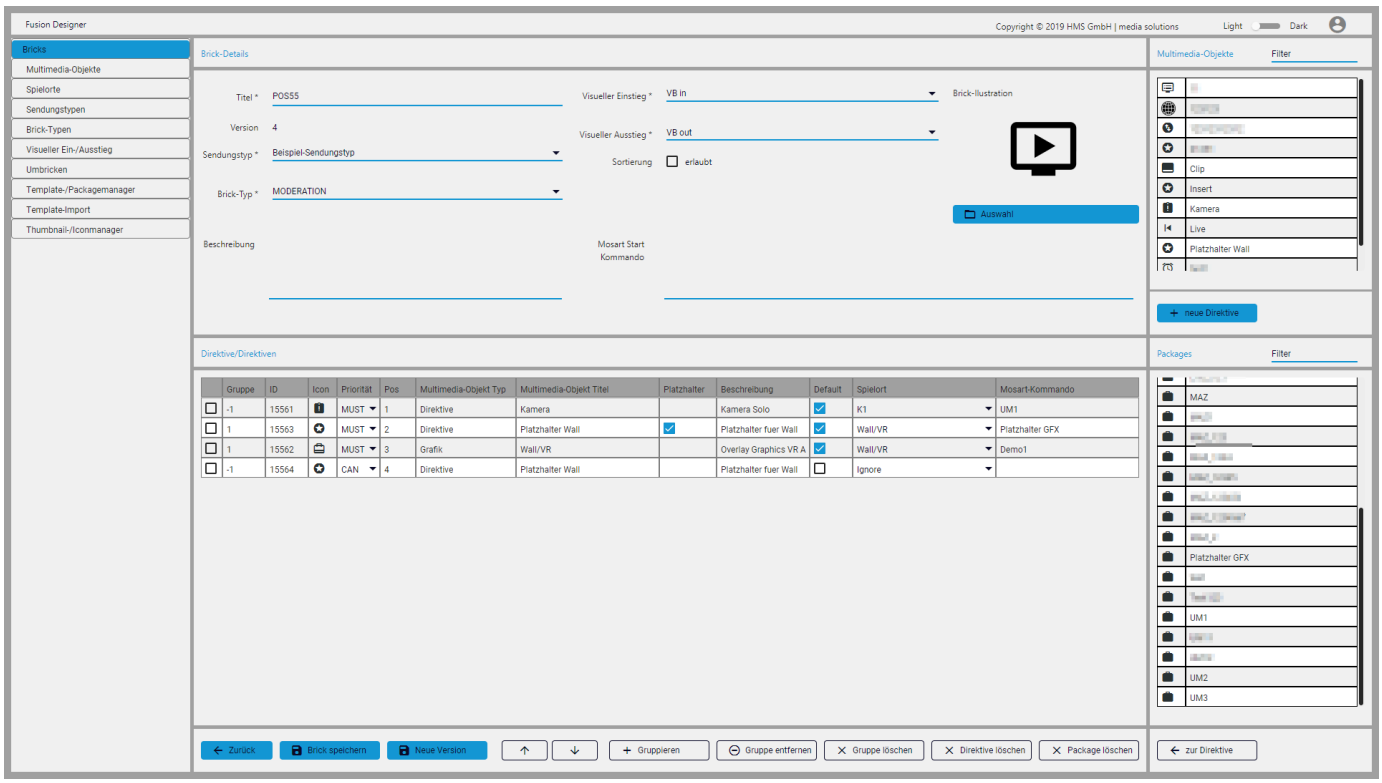

Figure: Details of a selected brick.

CREATING A NEW BRICK

To create a new brick, proceed as follows:

1. In the lower area click **New brick (Neuer Brick)**.
2. Enter a title and select the brick details. Fill in all mandatory fields marked with an asterisk.
3. To assign directives to the brick, select the corresponding element in the Multimedia objects (Multimedia-Objekte) section on the right and add it either by double-clicking it or by clicking **New directive (Neue Direktive)**.
4. To assign a package to a directive, select the corresponding target element in the list of already assigned directives, select the package to be assigned on the right and add it either by double-clicking or by clicking **Add to directive (Zur Direktive)**.
5. Click **Save brick (Brick speichern)**.

The brick is created and then displayed in the list of available bricks.

DUPLICATING A BRICK

To duplicate a brick, proceed as follows:

1. In the list of available bricks select the brick to be duplicated.
2. Click **Duplicate (Duplizieren)**.
3. Enter the name/title under which the duplicated brick should be saved.

> **Notice**
>
> If necessary, you can reuse the name of an existing brick.

4. Confirm by clicking **Apply (Übernehmen)**.

The selected brick is duplicated. All properties and components of the original brick are applied. Only the status of a duplicated brick is initially always set to "deactivated (deaktiviert)", regardless of the status of the original brick.

EDITING A BRICK

> **Notice**
>
> Only deactivated bricks can be edited. To edit an activated brick, you must first deactivate it by unchecking the checkbox in the **Active (Aktiv)** column. Confirm the subsequent dialog by clicking **Yes (Ja)**.

To edit a brick, proceed as follows:

1. In the list of available bricks select the brick to be edited.
2. Click **Edit (Bearbeiten)**.
3. Edit the brick details.
4. To assign directives to the brick, select the appropriate element in the **Multimedia objects (Multimedia-Objekte)** area on the right and either double-click it or click **New directive (Neue Direktive)** to add it.
5. To assign a package to a directive, select the corresponding target element in the list of already assigned directives, select the package to be assigned on the right and add it either by double-clicking it or by clicking **Add to directive (Zur Direktive)**.
6. To delete a directive, select the element to be deleted in the list of assigned directives and click **Delete directive (Direktive löschen)**.
7. Save the changes by clicking **Save brick (Brick Speichern)**.

The changes are saved.

CREATING A NEW VERSION OF A BRICK

To create a new version of a brick, proceed as follows:

1. Repeat steps 1-6 mentioned in Editing a brick.
2. To save the changes in a new version of the brick, click **New version (Neue Version)**.

The new version of the brick is saved.

CHANGING THE VERSION OF A BRICK TO BE USED BY THE SYSTEM

To change the version of a brick to be used by the system, proceed as follows:

1. In the list of available bricks, click the version number of the corresponding brick displayed in the **Version** column.

   All available versions of the selected brick are listed.
2. Select the version to be used.
3. Confirm the following dialog with **Yes (Ja)**.

The system uses the selected brick version.

DELETING A BRICK

To delete a brick, proceed as follows:

Warning

This action deletes all available versions of the selected brick.

1. Select the brick to be deleted.
2. Click **Delete (Löschen)**.
3. Confirm the following dialog with **Yes (Ja)**.

The brick is deleted.

3.3.3 Brick examples

Creating a brick of type VTR

BRICK COMPONENTS

A VTR is a pre-produced feature to be used as part of a show.

From a technical perspective, a VTR usually consists of at least one clip that plays full screen and an optional overlay graphic. Accordingly, a VTR brick created with Fusion could consist of the following directives, for example:

No.	Type	Title	Priority	Playback location	Default playback location	Mosart command
1	Clip	Clip	MUST	Full screen	Yes	VTR
2	Graphic	Insert	CAN	Insert	-	-

The first directive defines that a multimedia object of type **Clip** must be used in every story that uses this brick. Because of the used **MUST** priority, a clip is always required in the corresponding story. The clip is a default clip that is replaced later in the NRCS by a story-specific clip. Since the **Default playback location** option is enabled, the selected playback location **Fullscreen** is selected by default when the brick is assigned to a story in the NRCS. The used Mosart command **VTR** contains all the templates required to play out the clip via the studio automation on the corresponding studio device. The templates were previously imported from the studio automation and can be edited by the user if necessary.

The second directive defines that an additional insert graphic can optionally (due to the used priority **CAN**) be used in any story that uses this brick. In this example, the selected story location **Insert** allows the graphic to be displayed as an insert, e.g. not as full screen graphic, but as lower third. This means that the graphic is later played out by the connected graphics system and displayed as an overlay over the clip.

Notice

No Mosart command is required for graphics because the used graphics system (e.g. Viz Pilot) usually only needs the name of the graphic to identify it and play it out correctly.

Notice

Graphics are not managed by Fusion, but by the connected NRCS. Fusion can be used to add directives, but not to add graphics to a rundown.

Notice

If a brick that contains a multimedia object of type Graphic is assigned to a story in the NRCS, from the user's point of view special attention should be paid to the category of the graphic. If a user selects a graphic of a different category in the NRCS than the one defined in the brick, it is considered invalid by Fusion and set to `ignore`. As a result the studio automation ignores the graphic and does not play it.

> **Tip**
>
> If a brick contains a multimedia object of type Graphic with priority CAN, a user can add additional graphics in the NRCS. Fusion evaluates these as valid and returns them.

If this brick is used in a story in the connected NRCS, the used templates are passed to the studio automation. Due to the defined directives, the following two variants for the brick contents are possible here:

1. a clip without additional graphics
2. a clip with an additional graphic

CREATING THE BRICK

> **Tip**
>
> The general creation of a brick is described in chapter Managing bricks.

To create the previously described example brick for a VTR, proceed as follows:

1. Open Fusion Designer.
2. Make sure that the multimedia object types, playback locations and templates to be used in the brick already exist in Fusion. If this is not the case, create the required elements as described in the chapters Managing multimedia objects, Managing playback locations, Importing an automation template and Managing automation templates.
3. Select the main **Bricks** area on the left side.
4. Click **New brick (Neuer Brick)**.
5. Enter a title and select the brick details. Fill in all mandatory fields marked with an asterisk.
6. In the list of multimedia objects on the right, select the type **Clip** and click **New directive (Neue Direktive)**.

   The selected element is added as a directive.
7. To set the playback location as the default playback location, check **Default** in the added directive.
8. To add a Mosart command to the directive, select the directive, then select the package to be added (e.g. **VTR**) on the right, and add it either by double-clicking it or by clicking **Add to directive (Zur Direktive)**.
9. Select the type **Graphics (Grafik)** in the list of multimedia objects on the right and click **New directive (neue Direktive)**.

   The selected element is added as a directive.
10. Click **Save brick (Brick speichern)**.

The brick is saved, is available in the connected NRCS and can be assigned to a story.

Creating a brick of type external source

BRICK COMPONENTS

In the case of an external source, e.g. in the context of a news show, a reporting person who is on location at an event is switched live into the studio. This live signal is manipulated, e.g. via DVE (Digital Video Effect), and displayed in a reduced size in a box next to the presenter.

From a technical point of view, an external source usually consists of at least a live/camera signal and an optional graphic or DVE. Accordingly, a brick for an external source created with Fusion could consist of the following directives, for example:

No.	Type	Title	Priority	Playback location	Default playback location	Mosart command
1	Directive	Live	MUST	DEL 21	Yes	LIVE21
2	Graphic	Wall/VR	CAN	Wall/VR	Yes	-

The first directive defines that a multimedia object of type **Directive** with title **Live** must be used in every story that uses this brick. Because of the used priority **MUST** this directive is always required in the corresponding story. Since the **Default playback location** option is enabled, the selected playback location is selected by default when the brick is assigned to a story in the NRCS. The used Mosart command **LIVE21** can be replaced by any other command in the NRCS. The templates were previously imported from the studio automation and can be edited by the user if necessary.

The second directive defines that an additional wall graphic can optionally (due to the used priority **CAN**) be used in any story that uses this brick. In this example, the selected playback location **Wall/VR** allows it to fade in on the video wall in the background of the moderating person. Since the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS, when the brick is assigned to a story.

Notice

No Mosart command is required for graphics because the used graphics system (e.g. Viz Pilot) usually only needs the name of the graphic to identify it and play it out correctly.

Notice

Graphics are not managed by Fusion, but by the connected NRCS. Fusion can be used to add directives, but not to add graphics to a rundown.

Notice

If a brick that contains a multimedia object of type Graphic is assigned to a story in the NRCS, from the user's point of view special attention should be paid to the category of the graphic. If a user selects a graphic of a different category in the NRCS than the one defined in the brick, it is considered invalid by Fusion and set to `ignore`. As a result the studio automation ignores the graphic and does not play it.

> **Tip**
>
> If a brick contains a multimedia object of type Graphic with priority CAN, a user can add additional graphics in the NRCS. Fusion evaluates these as valid and returns them.

If this brick is used in a story in the connected NRCS, the used templates are passed to the studio automation. Based on the defined directives, the following two variants for the brick contents are possible here:

1. a live/camera signal without additional wall graphics
2. a live/camera signal with an additional wall graphic

CREATING THE BRICK

> **Tip**
>
> The general creation of a brick is described in chapter Managing bricks.

To create the previously described example brick for an external source, proceed as follows:

1. Open Fusion Designer.
2. Make sure that the multimedia object types, playback locations and templates to be used in the brick already exist in Fusion. If this is not the case, create the required elements as described in the chapters Managing multimedia objects, Managing playback locations, Importing an automation template and Managing automation templates.
3. Select the main **Bricks** area on the left side.
4. Click **New brick (Neuer Brick)**.
5. Enter a title and select the brick details. Fill in all mandatory fields marked with an asterisk.
6. In the list of multimedia objects on the right, select the **Live** type and click **New directive (Neue Direktive)**.

   The selected element is added as a directive.
7. To set the playback location as the default playback location, check **Default** in the added directive.
8. To add a Mosart command to the directive, select the directive, then select the package to be added (e.g. **LIVE21**) on the right, and add it either by double-clicking it or by clicking **Add to directive (Zur Direktive)**.
9. In the list of multimedia objects on the right, select the type **Graphic (Grafik)** and click **New directive (Neue Direktive)**.

   The selected element is added as a directive.
10. Click **Save brick (Brick speichern)**.

The brick is saved, is available in the connected NRCS and can be assigned to a story.

Creating a brick of type moderation

BRICK COMPONENTS

From a technical point of view, a moderation (e.g. as part of a news show) usually consists of at least a camera, an optional wall graphic, and an optional overlay graphic. A brick for a moderation created with Fusion could accordingly consist of, for example, the following directives:

No.	Type	Title	Priority	Playback location	Default playback location	Mosart command
1	Directive	Camera	MUST	C1	Yes	EX UM1
2	Graphics	Wall/VR	CAN	Wall/VR	Yes	-
3	Graphics	Insert	CAN	Insert	Yes	-

The first directive defines that a multimedia object of type **Directive** with the title **Camera** must be used in every story that uses this brick. Because of the used priority **MUST** this camera directive is always required in the corresponding story. It is used to control the camera at the used playback location **C1**. Because the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS when the brick is assigned to a story. The used Mosart command **EX UM1** contains all necessary templates to control the camera via the studio automation. The templates were previously imported from the studio automation and can be edited by the user if necessary.

The second directive defines that an additional wall graphic can optionally (due to the used priority **CAN**) be used in any story that uses this brick. In this example, the selected playback location **Wall/VR** allows it to fade in on the video wall in the background of the moderating person. Since the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS, when the brick is assigned to a story.

Notice

No Mosart command is required for graphics because the used graphics system (e.g. Viz Pilot) usually only needs the name of the graphic to identify it and play it out correctly.

Notice

Graphics are not managed by Fusion, but by the connected NRCS. Fusion can be used to add directives, but not to add graphics to a rundown.

Notice

If a brick that contains a multimedia object of type Graphic is assigned to a story in the NRCS, from the user's point of view special attention should be paid to the category of the graphic. If a user selects a graphic of a different category in the NRCS than the one defined in the brick, it is considered invalid by Fusion and set to `ignore`. As a result the studio automation ignores the graphic and does not play it.

> **Tip**
>
> If a brick contains a multimedia object of type Graphic with priority CAN, a user can add additional graphics in the NRCS. Fusion evaluates these as valid and returns them.

The third directive defines that an additional insert graphic can optionally (due to the used priority **CAN**) be used in any story that uses this brick. In this example, the selected playback location **Insert** allows the graphic to be displayed as an insert, i.e. not as full screen graphic, but as lower third. Since the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS, when the brick is assigned to a story.

If this brick is used in a story in the connected NRCS, the used templates are passed to the studio automation. Due to the defined directives the following four variants for the brick content are possible:

1. one camera without additional graphics
2. one camera with additional wall graphics
3. one camera with additional insert graphic
4. one camera with additional wall graphic and insert graphic

CREATING THE BRICK

> **Tip**
>
> The general creation of a brick is described in chapter Managing bricks.

To create the previously described example brick for a moderation, proceed as follows:

1. Open Fusion Designer.
2. Make sure that the multimedia object types, playback locations and templates to be used in the brick already exist in Fusion. If this is not the case, create the required elements as described in Managing multimedia objects, Managing playback locations, Importing an automation template and Managing automation templates.
3. Select the main **Bricks** section on the left.
4. Click **New brick (Neuer Brick)**.
5. Enter a title and select the brick details. Fill in all mandatory fields marked with an asterisk.
6. In the list of multimedia objects on the right, select the **Camera (Camera)** type and click **New directive (Neue Direktive)**.

   The camera is added as a directive to the brick.
7. To set the playback location as default playback location, check **Default** in the added directive.
8. To add a Mosart command to the directive, select the directive, then select the package to be added on the right (e.g. **EX UM1**) and add it either by double-clicking it or by clicking **Add to directive (Zur Direktive)**.
9. Select the type **Wall/VR** in the list of multimedia objects on the right and click **New directive (neue Direktive)**.

   The Wall graphic is added to the brick as a directive.
10. To set the playback location as default, check **Default** in the added directive.
11. In the list of multimedia objects on the right select the type **Insert** and click **New directive (neue Direktive)**.

    The insert graphic is added to the brick as a directive.

12. To set the playback location as the default playback location, check **Default** in the added directive.
13. Click **Save brick (Brick speichern)**.

The brick is saved in the system and can be assigned to a story in the connected NRCS.

Special case - Creating a brick with a MUST group

BRICK COMPONENTS

A MUST group is used to combine multiple directives into one group and to define the used multimedia objects as valid. At least one of the multimedia objects defined in the group must be used for the group to be considered valid. The element marked as **Default playback location** is returned to the connected NRCS by default when the corresponding brick is assigned to an empty story. Other multimedia objects used within the group, while also considered valid, must be manually selected by the user to replace the element marked as the default playback location. In this case, if a user selects a multimedia object that is not in the defined MUST group, Fusion will evaluate it as invalid, set it to `ignore`, and return the multimedia object marked as the default playback location to the NRCS instead.

Notice

Non-grouped directives are identifiable in Fusion by the entry **-1** in the Group column. For grouped directives the number of the respective group is listed in this column.

For example, a brick created with Fusion for a moderation with a MUST group could consist of the following directives:

No.	Group	Type	Title	Priority	Playback location	Default playback location	Mosart command
1	1	Directive	Camera	MUST	C1	Yes	EX UM1
2	1	Directive	Camera	MUST	C2	-	EX UM2
3	-1	Graphic	Wall/VR	CAN	Wall/VR	Yes	-
4	-1	Graphic	Insert	CAN	Insert	Yes	-

The first directive defines that a multimedia object of type **Directive** with the title **Camera** must be used in every story that uses this brick. Because of the used priority **MUST** this camera directive is always required in the corresponding story. It is used to control the camera at the used playback location **C1**. Because the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS when the brick is assigned to a story. The used Mosart command **EX UM1** contains all necessary templates to control the camera via the studio automation. The templates were previously imported from the studio automation and can be edited by the user if necessary.

The second directive has the same structure as directive 1 but uses **C2** (which is not marked as default) as the playback location and the Mosart command **EX UM2**. Directives 1 and 2 are combined in a MUST group, recognizable by the number **1** in the group column. Because of the components of this group, both playback locations C1 and C2 are considered valid by Fusion. If a user would try to use another playback location (e.g. C3) in the NRCS or via Fusion Editor, it is set to `ignore` and the default playback location C1 is returned to the NRCS.

The third directive defines that an additional wall graphic can optionally (due to the used priority **CAN**) be used in any story that uses this brick. In this example, the selected playback location **Wall/VR** allows it to fade in on the video wall in the background of the moderating person. Since the **Default playback location** option is enabled, the selected playback location is selected by default in NRCS, when the brick is assigned to a story.

Notice

No Mosart command is required for graphics because the used graphics system (e.g. Viz Pilot) usually only needs the name of the graphic to identify it and play it out correctly.

Notice

Graphics are not managed by Fusion, but by the connected NRCS. Fusion can be used to add directives, but not to add graphics to a rundown.

Notice

If a brick that contains a multimedia object of type Graphic is assigned to a story in the NRCS, from the user's point of view special attention should be paid to the category of the graphic. If a user selects a graphic of a different category in the NRCS than the one defined in the brick, it is considered invalid by Fusion and set to `ignore`. As a result the studio automation ignores the graphic and does not play it.

Tip

If a brick contains a multimedia object of type Graphic with priority CAN, a user can add additional graphics in the NRCS. Fusion evaluates these as valid and returns them.

The fourth directive defines that an additional insert graphic can optionally (due to the used priority **CAN**) be used in any story that uses this brick. In this example, the selected playback location **Insert** allows displaying it as an insert, e.g. not as a full-screen graphic, but as a lower third. Since the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS when the brick is assigned to a story.

If this brick is used in a story in the connected NRCS, the used templates are passed to the studio automation. Due to the defined directives the following four variants for the brick content are possible:

1. a camera without additional graphics
2. one camera with additional wall graphics
3. one camera with additional insert graphic
4. one camera with additional wall-graphic and insert-graphic

CREATING THE BRICK

Tip

The general creation of a brick is described in chapter Managing bricks.

To create the previously described example brick for a moderation, proceed as follows:

1. Open Fusion Designer.

2. Make sure that the multimedia object types, play-locations and templates to be used in the brick already exist in Fusion. If this is not the case, create the required elements as described in Managing multimedia objects, Managing playback locations, Importing an automation template and Manage automation templates.
3. Click the main **Bricks** section on the left.
4. Click **New brick (Neuer Brick)**.
5. Enter a title and select the brick details. Fill in all mandatory fields marked with an asterisk.
6. In the list of multimedia objects on the right, select the **Camera (Kamera)** type and click **New directive (Neue Direktive)**.

   The camera is added as a directive to the brick.
7. To set the playback location as default playback location, check **Default** in the added directive.
8. To add a Mosart command to the directive, select the directive, select the package to be added on the right (e.g. **EX UM1**) and add it either by double-clicking it or by clicking **Add to directive (Zur Direktive)**. 9.
9. Select the type **Camera (Kamera)** in the list of multimedia objects on the right and click **New directive (Neue Direktive)**.

   The camera is added to the brick as a directive.
10. To add a Mosart command to the directive, select the directive, select the package to be added (e.g. **EX UM2**) on the right and add it either by double-clicking or by clicking **Add to directive (Zur Direktive)**.
11. Group both directives. To do this, check the two checkboxes in the left column of the list of directives and click **Group (Gruppieren)**.

    Both directives are added to group 1.
12. Select the type **Wall/VR** in the list of multimedia objects on the right and click **New directive (Neue Direktive)**.

    The Wall graphic is added as a directive to the brick.
13. To set the playback location as default playback location, enable the **Default** option in the added directive.
14. Select the **Insert** type in the list of multimedia objects on the right and click **New directive (Neue Direktive)**.

    The insert graphic is added to the brick as a directive.
15. To set the playback location as the default playback location, check **Default** in the added directive.
16. Click **Save brick (Brick speichern)**.

The brick is saved and is available for assignment to a story in the connected NRCS.

Special case - Creating a brick with a placeholder

BRICK COMPONENTS

A placeholder can be used to define, for example, a default graphic for a specific playback location that is played automatically whenever no story-specific graphic is selected in the NRCS for that playback location. If, on the other hand, an appropriate graphic is selected in the NRCS, Fusion replaces the placeholder with the selected graphic.

> **Notice**
>
> A specific example for such a graphic is the animated world map or the rotating globe in the news features of German broadcaster ARD. This is always displayed by default on the video wall behind the presenter if no story-specific graphic is displayed.

In Fusion, a placeholder is always a multimedia object of type directive and is only useful within a group.

For example, a brick created with Fusion for a moderation with a placeholder could consist of the following directives:

No.	Group	Type	Title	Priority	Playback location	Default playback location	Placeholder	Mosart command
1	-1	Directive	Camera	MUST	C1	Yes	-	UM1
2	1	Directive	Placeholder Wall	MUST	Wall/VR	Yes	Yes	Placeholder GFX
3	1	Graphics	Wall/VR	MUST	Wall/VR	Yes	-	-

The first directive defines that a multimedia object of type **Directive** with the title **Camera** must be used in every story that uses this brick. Because of the used priority **MUST** this camera directive is always required in the corresponding story. It is used to control the camera at the used playback location **C1**. Because the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS, when the brick is assigned to a story. The used Mosart command **UM1** contains all necessary templates to control the camera via the studio automation. The templates were previously imported from the studio automation and can be edited by the user if necessary.

The second directive defines a placeholder for a wall graphic that (because of the used priority **MUST**) must be used in any story that uses this brick. In this example, the selected playback location **Wall/VR** allows it to fade in on the video wall in the background of the moderating person. Since the **Default playback location** option is enabled, the selected playback location is selected by default when the brick is assigned to a story in the NRCS. The used Mosart command **Placeholder GFX** contains all the necessary templates to control the video wall via the studio automation. The templates were previously imported from the studio automation and can be edited by the user if necessary.

The third directive defines that an additional wall graphic (due to the used priority **MUST**) must be used in any story that uses this brick. In this example, the selected playback location **Wall/VR** allows it to fade in on the video wall in the background of the moderating person. Since the **Default playback location** option is enabled, the selected playback location is selected by default in the NRCS when the brick is assigned to a story.

Notice

No Mosart command is required for graphics because the used graphics system (e.g. Viz Pilot) usually only needs the name of the graphic to identify it and play it out correctly.

Notice

Graphics are not managed by Fusion, but by the connected NRCS. Fusion can be used to add directives, but not to add graphics to a rundown.

Notice

If a brick that contains a multimedia object of type Graphic is assigned to a story in the NRCS, from the user's point of view special attention should be paid to the category of the graphic. If a user selects a graphic of a different category in the NRCS than the one defined in the brick, it is considered invalid by Fusion and set to `ignore`. As a result the studio automation ignores the graphic and does not play it.

Tip

If a brick contains a multimedia object of type Graphic with priority CAN, a user can add additional graphics in the NRCS. Fusion evaluates these as valid and returns them.

If this brick is used in a story in the connected NRCS, the used templates are passed to the studio automation. Due to the defined directives the following variants for the brick content are possible:

1. one camera with a placeholder wall graphic
2. one camera with a story-specific wall graphic

CREATING THE BRICK

Tip

The general creation of a brick is described in chapter Managing bricks.

To create the previously described example brick for a moderation with placeholder, proceed as follows:

1. Open Fusion Designer.
2. Make sure that the multimedia object types, playback locations and templates to be used in the brick already exist in Fusion. If this is not the case, create the required elements as described in section Managing multimedia objects, Managing playback locations, Importing an automation template and Manage automation templates.
3. Click the main **Bricks** area on the left side. 4.
4. Click **New Brick (Neuer Brick)**.
5. Enter a title and select the brick details. Fill in all mandatory fields marked with an asterisk.

6. In the list of multimedia objects on the right, select the type **Camera (Kamera)** and click **New directive (Neue Direktive)**.

   The camera is added as a directive to the brick.

7. To set the playback location as default playback location, check **Default** in the added directive.
8. To add a Mosart command to the directive, select the directive, select the package to be added (e.g. **UM1**) on the right and add it either by double-clicking it or by clicking **Add to directive (zur Direktive)**.
9. In the list of multimedia objects on the right, select the type **Placeholder Wall (Platzhalter Wall)** and click **New directive (Neue Direktive)**.

   The placeholder is added to the brick as a directive.

10. To set the playback location as default playback location, check **Default** in the added directive.
11. To add a Mosart command to the directive, select the directive, select the package to be added on the right (e.g. **Placeholder GFX (Platzhalter GFX)**) and add it either by double-clicking it or by clicking **Add to directive (zur Direktive)**.
12. Select the type **Wall/VR** in the list of multimedia objects on the right and click **New directive (Neue Direktive)**.

    The Wall graphic is added as a directive to the brick.

13. To set the playback location as default playback location, enable **Default** option in the added directive.
14. Group the placeholder and graphic directives. To do this, check the two checkboxes in the left column of the list of directives and click **Group (Gruppieren)**.

    Both directives are added to group 1.

15. Click **Save brick (Brick speichern)**.

The brick is saved and is available for assignment to a story in the connected NRCS.

Special case - Creating a brick with a Mosart start command

BRICK COMPONENTS

A Mosart start command is used to create a defined initial state of certain studio devices. This can be used, for example, to place a camera at a specific start position that is required for a useful start to a show. If this start command is added to a brick that also contains other directives, the start command is executed before all other directives. It can alternatively be added to an empty brick.

For example, a template with a start command could have the following content:

```
<mosarttemplate>
    <type name="BREAK" templateset="TEST" category="">
        <variants fieldtype="LIST" value="SETUP">
            <variant name="SETUP">
                <fields></fields>
            </variant>
        </variants>
    </type>
</mosarttemplate>
```

CREATING THE BRICK

> **Tip**
>
> The general creation of a brick is described in chapter Managing bricks.

To create a brick with a Mosart start command, proceed as follows:

1. Open Fusion Designer.
2. Make sure that the multimedia object types, playback locations and templates to be used in the brick already exist in Fusion. If this is not the case, create the required elements as described in chapters Managing multimedia objects, Managing playback locations, Importing automation template and Managing automation templates.
3. Click the main **Bricks** area on the left side.
4. Click **New brick (Neuer Brick)**.
5. Enter a title and select the brick details. Fill in all mandatory fields marked with an asterisk.
6. Paste the XML code of the template for the start command into the field **Mosart start command (Mosart Start Kommando)**.

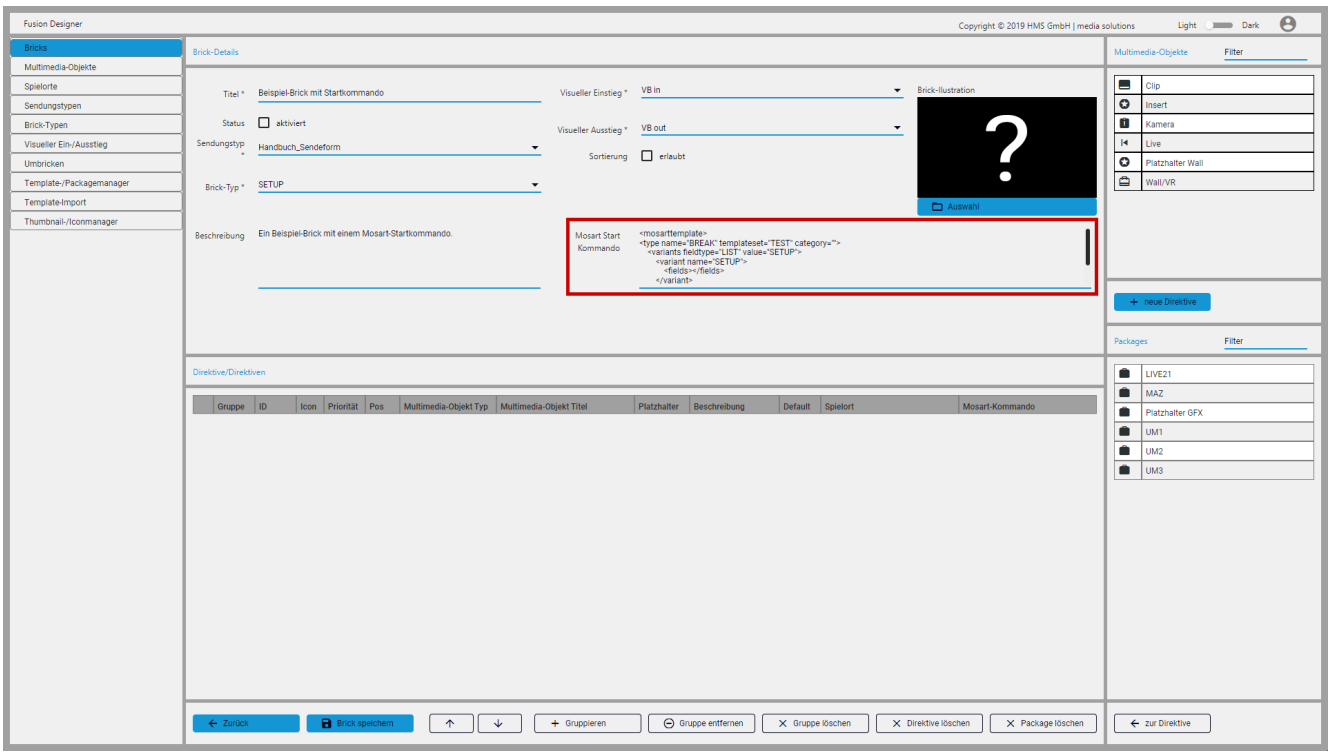

Figure: Add Mosart start command

7. If you want the brick to contain directives, select the appropriate type in the multimedia objects list on the right and click **New directive (Neue Direktive)**.

   The selected element is added as a directive.

8. If necessary, change the **Priority (Priorität)**, **Placeholder (Platzhalter)**, **Default playback location (Default-Spielort)**, and **Mosart command (Mosart Kommando)** settings of the directive.
9. Repeat steps 7 and 8 to add more directives, if necessary.
10. Click **Save brick (Brick speichern)**.

The brick is saved and is available for assignment to a story in the connected NRCS.

3.3.4 Re-bricking

In the **Re-bricking (Umbricken)** area you can define rules to re-assign show types and bricks.

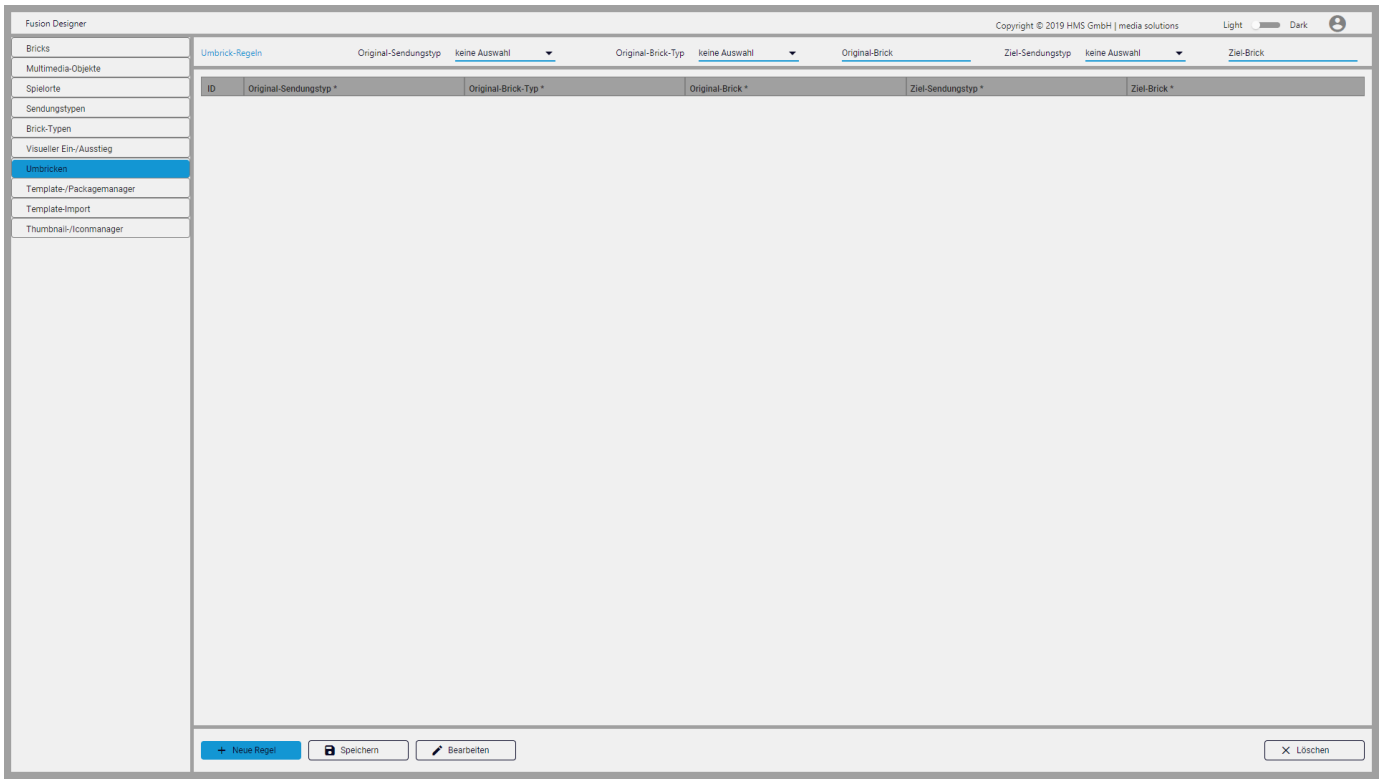

Figure: Re-bricking

Creating a new rule

To create a new re-bricking rule, proceed as follows:

1. Click **New rule (Neue Regel)**.
2. Select **Original show type (Original-Sendungstyp)**, **Original brick type (Original-Brick-Typ)**, **Original brick (Original-Brick)**, **Target show type (Ziel-Sendungstyp)**, and **Target brick (Ziel-Brick)**.
3. Click **Save (Speichern)**.

Editing an existing rule

To edit an existing re-bricking rule, proceed as follows:

1. Select the rule to be edited.
2. Click **Edit (Bearbeiten)**.
3. Select **Original show type (Original-Sendungstyp)**, **Original brick type (Original-Brick-Typ)**, **Original brick (Original-Brick)**, **Target show type (Ziel-Sendungstyp)**, and **Target brick (Ziel-Brick)**.
4. Click **Save (Speichern)**.

Deleting an existing rule

To delete an existing re-bricking rule, proceed as follows:

1. Select the rule to be deleted.
2. Click **Delete**.

4. Fusion Editor

4.1 Overview

Fusion Editor enables the linking of bricks and stories, which allows stories to be prepared for the connected studio automation.

For this purpose, Fusion Editor can either be used as a stand-alone user interface or integrated into the connected NRCS.

It provides the following functions:

- selection of bricks
- selection of the playback location of multimedia objects
- selection and editing of multimedia object parameters
- adjusting the order of multimedia objects
- linking of new directives
- deleting existing directives
- re-arranging stories by selecting a different brick

> **Notice**
>
> Both bricks must belong to the same show type and must be of the same brick type.

4.2 User Interface

To open Fusion Editor, access the following address in your browser:

`http://<host-name>:23000/`

Replace `<host-name>` with the name of your Fusion host.

> **Notice**
>
> The Fusion Editor user interface is optimized for Google Chrome. Use only a recent version of this browser to be able to use the full range of Fusion Editor functions.

The user interface is structured as follows:

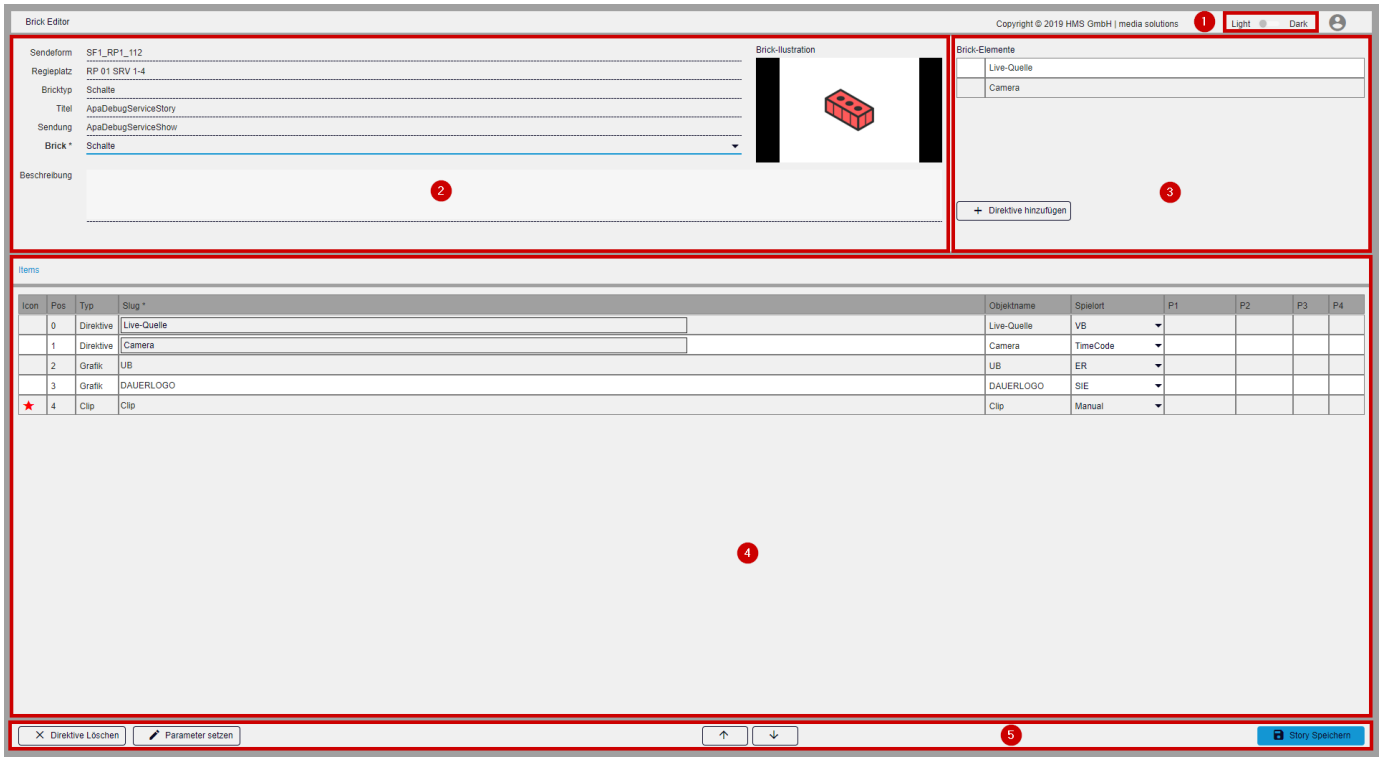

Figure: Fusion Editor

1. Switch for changing the design theme of the user interface
2. Brick story assignment details
3. Directives of the currently selected brick
4. List of all selected directives
5. Functions to edit the brick story assignment

4.3 Workflows

4.3.1 Editing a brick story assignment

To edit an assignment, proceed as follows:

1. Select a show type.
2. Select a brick.
3. Add another directive to the list of items by selecting the brick item to be added in the **Brick elements (Brick-Elemente)** section on the right and either double-clicking it or clicking **Add to directive (Zur Direktive)**.
4. Edit the list of items if necessary. Use the arrow icons to change the order of the items. In addition, you can adjust the slug (for the **Directive (Direktive)** item type) and the playback location.
5. To change the parameters of an item, select the item to be edited and click **Set parameters (Parameter setzen)**.
6. Then enter the appropriate values for the parameters and click **Apply (Übernehmen)**.

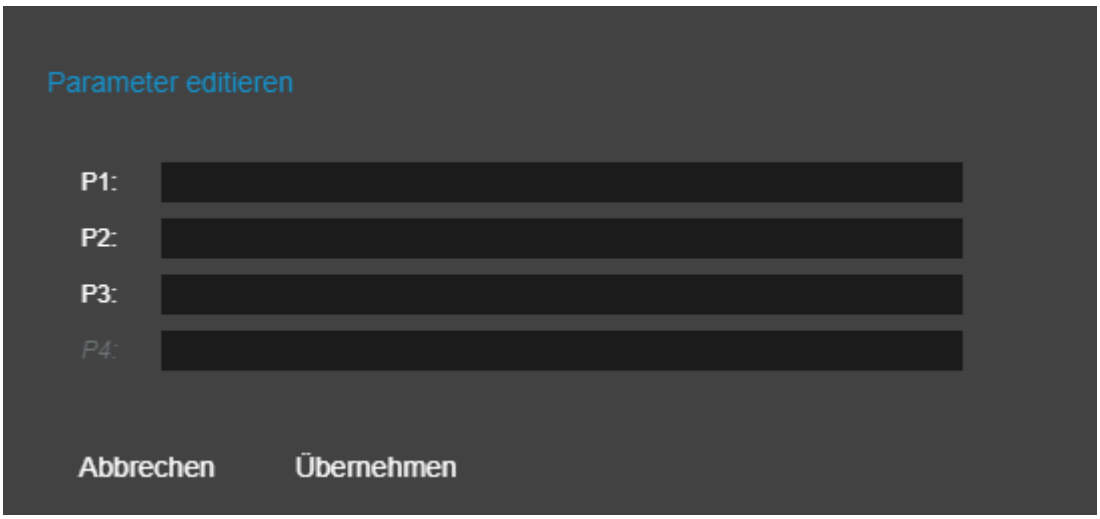

Figure: Edit item parameters

7. To delete an already assigned directive, select it in the list of items and click **Delete Directive (Direktive löschen)**.
8. To save your changes, click **Save story (Story speichern)**.

The edited brick story assignment is saved.