

## HowTo 2 - using Commands in GSE

A guide to enlarge your GSE project with commands

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## 1. Introduction

This document explains step by step how to use commands in a GSE project.

### 1.1. Assumed knowledge

- Basic handling of GSE
- It is recommended to read “HowTo 1 - build a project step by step” first.

### 1.2. Prerequisites

- Unpacked Guiliani SDK including GSE
- Your project “step by step” created in “HowTo 1” (or the “step by step” project inside the folder called “HowTo 1 - sample solution”)

### 1.3. Documentation conventions

Whenever you can use keys from your computer’s keyboard, these will be displayed in square brackets (e.g.,” To run your project press [Ctrl] + [r].”).

Menu commands or file path used in this document will be shown in *italic*.

Text that appears in the software on controls will be printed in **bold and blue**.

- ▶ Whenever the reader of this document has to do something in his project, the text will start with this triangle.
- ➡ Results will be shown using this arrow.

In this document, we use icons whenever we will warn the user or will give him additional or important information.



The speech bubble icon will show additional helpful information.



Whenever a text begins with an exclamation mark icon, it contains important information that is essential for the current chapter.



A warning sign icon signals serious issues and potential risks that require your full attention.

## 1.4. Shortcuts

In the documents, we often select a command from the window. These can be selected by the following short cuts, too:

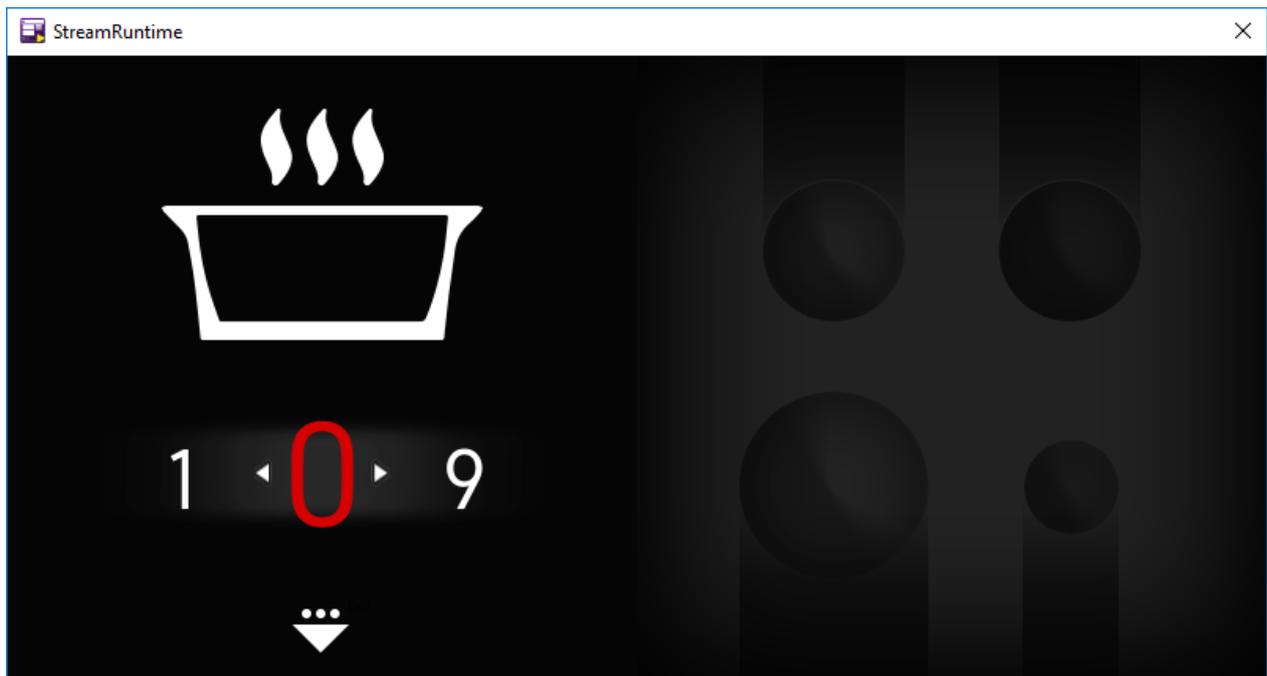
<i>File</i> → <i>New Project...</i>	[Ctrl] + [Shift] + [n]
<i>File</i> → <i>New Dialog...</i>	[Ctrl] + [n]
<i>File</i> → <i>Save Project...</i>	[Ctrl] + [s]
<i>File</i> → <i>Run Simulation...</i>	[Ctrl] + [r]

## 1.5. This document's goal

At the end of this HowTo you will have learned

- how to use a command
- changing between dialogs
- and more

We will have managed to change between the main and a settings dialog.  
It will look like this:



## 2. Adding a command without programming

### 2.1. Step 1: Load project “step by step”

- ▶ Start the GSE and load the created Step by Step project from HowTo 1 (step\_by\_step.gpr).

### 2.2. Step 2: Add new dialog

We will add a second dialog to our project and buttons, to move from one dialog to the other. To do this, we have to add the second dialog.

- ▶ Choose *File* → *New Dialog* from the menu.

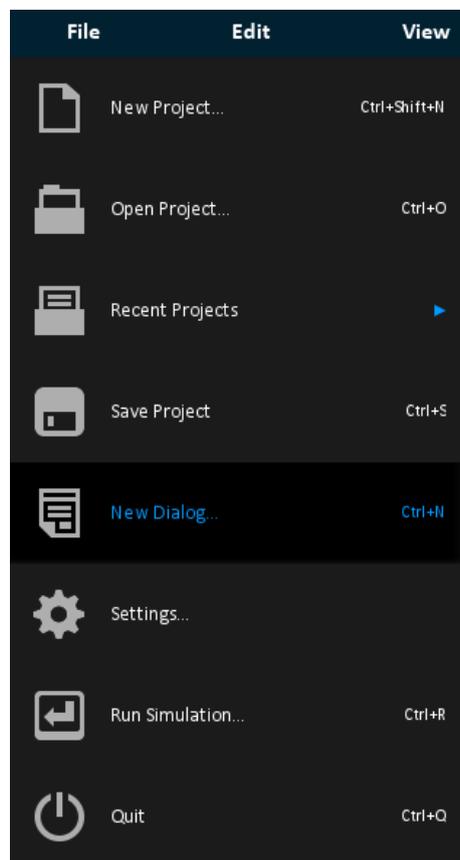


Fig. 1 File menu – New Dialog

- ➔ The window “**Create new dialog**” opens.

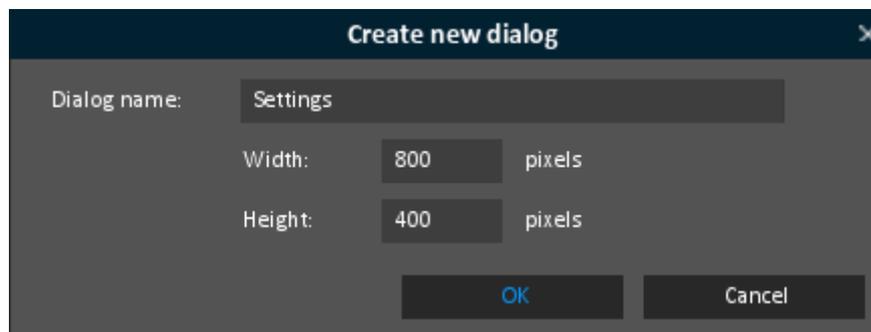


Fig. 2 Create new dialog

- ▶ Name the dialog “**Settings**” and enter 800 for **Width** and 400 for **Height**.



If you have not closed the GSE since working on HowTo 1, these values are already default, because they are the dimension from our main dialog.

- ▶ Click onto “**OK**”.

- ➔ The dialog has been added to the “**Dailogs**” window.

- ➔ As you can see now, our window, where we create our dialog, has been labeled “**Settings / AID\_SETTINGS**”.

## 2.3. Step 3: Set the background of the new dialog

In “HowTo 1” you have learned, that the dialog’s background will be set by using an image which is taking up the whole dialog.

- ▶ Add an image from the “**Controls**” window to the **settings** dialog.

We have to change the “**ImageID**”.

- ▶ Insert the image “background-settings.png” from the “HowTo 2 - resources” folder inside the documentation folder within your SDK’s folder.



If you have problems at this point, please take a look into the document “HowTo 1 - build a project step by step” and read through chapter 2.5 Setting the dialog’s background.

- ▶ Now spread the image over the whole dialog by setting the image’s **Width** and **Height** to the dialog’s values (800 and 400).

## 2.4. Step 4: Add buttons

To navigate between the two dialogs, we have to add buttons in both dialogs. First we will add an “up” button to our settings dialog.

- ▶ Click onto “**button**” in the “**controls**” window to add a button. Set the button’s position as stated below:

<b>XPos</b>	368
<b>YPos</b>	0
<b>Width</b>	64
<b>Height</b>	64

- ➔ The project should look like this:

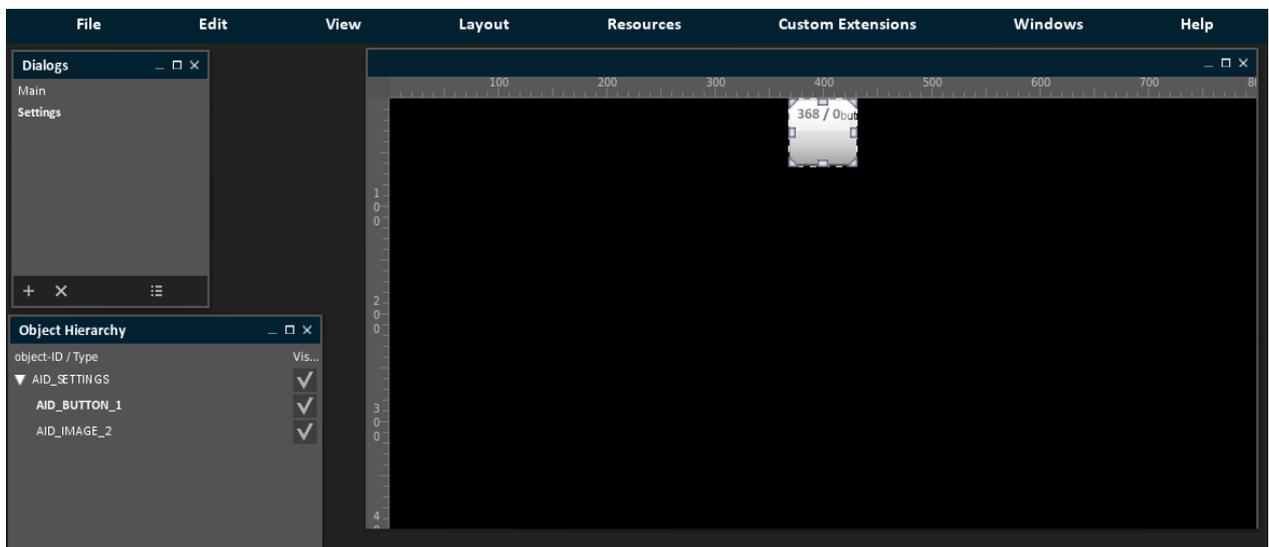


Fig. 3 Added button to Settings

Now change all five ImageIDs of the button:

- ▶ In the Attributes-Window click onto the first **ImageID** button (attribute name: ImageIDNormal in the group GUIButton). In the new opened window click onto “**Insert new image**”.
- ▶ Choose the path to the image by clicking onto the “...” button.
- ▶ Navigate to the data folder for this How To. Here you will find a folder named “How to 2 - resources”. Inside, select “up\_button\_standard.png”.

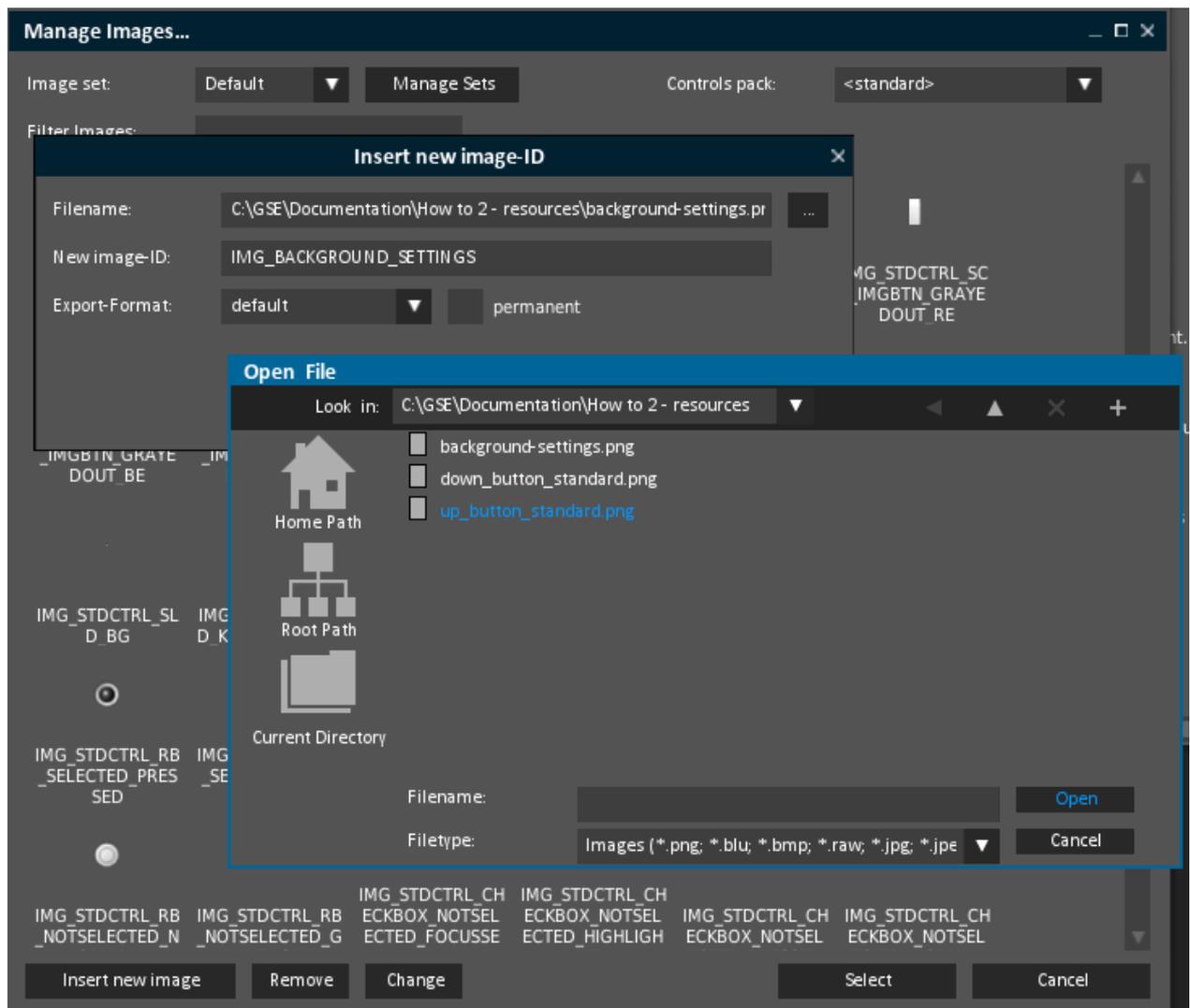


Fig. 4 choose up image

- ▶ Click onto **“Open”**.
- ▶ Click onto **“OK”**.
- ▶ Click onto **“Select”**.

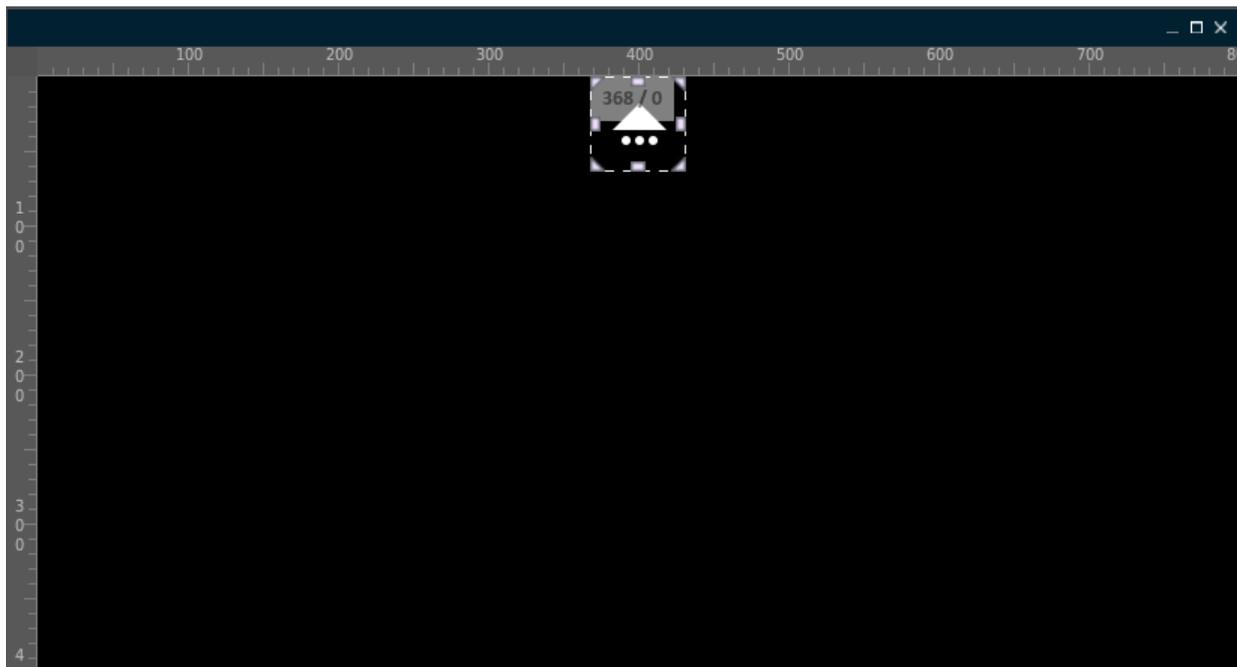


Fig. 5 Settings with up button

- ▶ For the next four **ImageID** buttons, you have to click onto the respective **IMG\_STDCTRL...** button and then doubleclick onto the image **“IMG\_UP\_BUTTON\_STANDARD”**.



In this example we do not use different images for different button states. Normally, you can have different images for the five states: standard, highlighted, pressed, grayed out and focused.

- ▶ Change to the **Main** dialog by clicking onto **“Main”** in the **“Dialogs”** window.

Here, we will add a button, to change to the settings dialog.

- ▶ Click onto **“button”** in the **“controls”** menu to add a button. Set the button’s position as stated below:

<b>XPos</b>	168
<b>YPos</b>	336
<b>Width</b>	64
<b>Height</b>	64

- ▶ Click onto the first **ImageID** button. In the new opened window click onto **“Insert new image”**.
- ▶ Choose the path to the image by clicking onto the **“...”** button.
- ▶ Navigate to the folder containing the HowTo-resources. Here you will find a folder named **“How to 2 - resources”**. Inside, select **“down\_button\_standard.png”**.

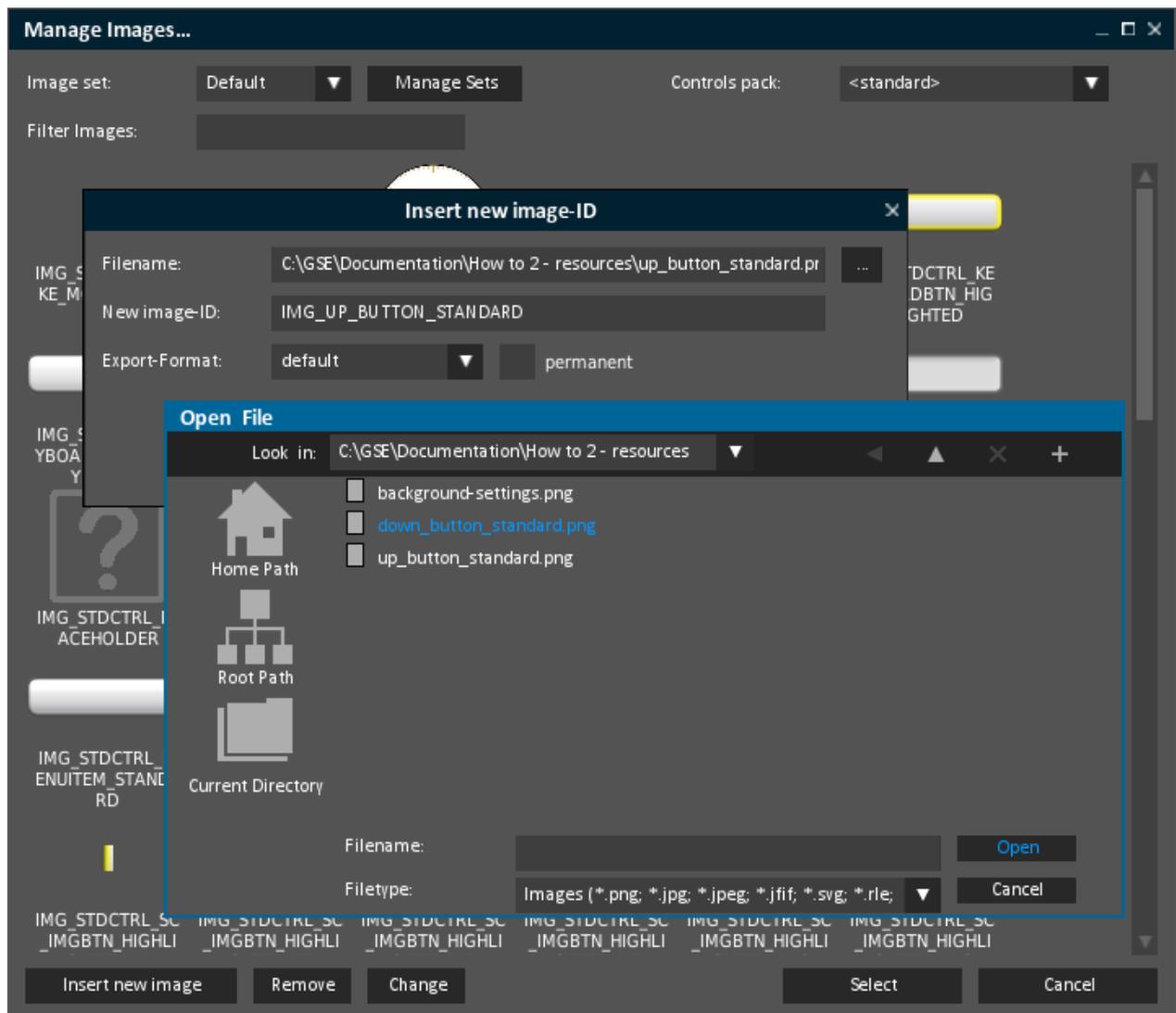


Fig. 6 choose down image

- ▶ Click onto **“Open”**.
- ▶ Click onto **“OK”**.
- ▶ Click onto **“Select”**.
- ▶ For the next four **ImageID** buttons, you have to click onto the respective **IMG\_STDCTRL...** button and then double click onto the image **“IMG\_UP\_BUTTON\_STANDARD”**.

Your “Main” dialog should look like this:

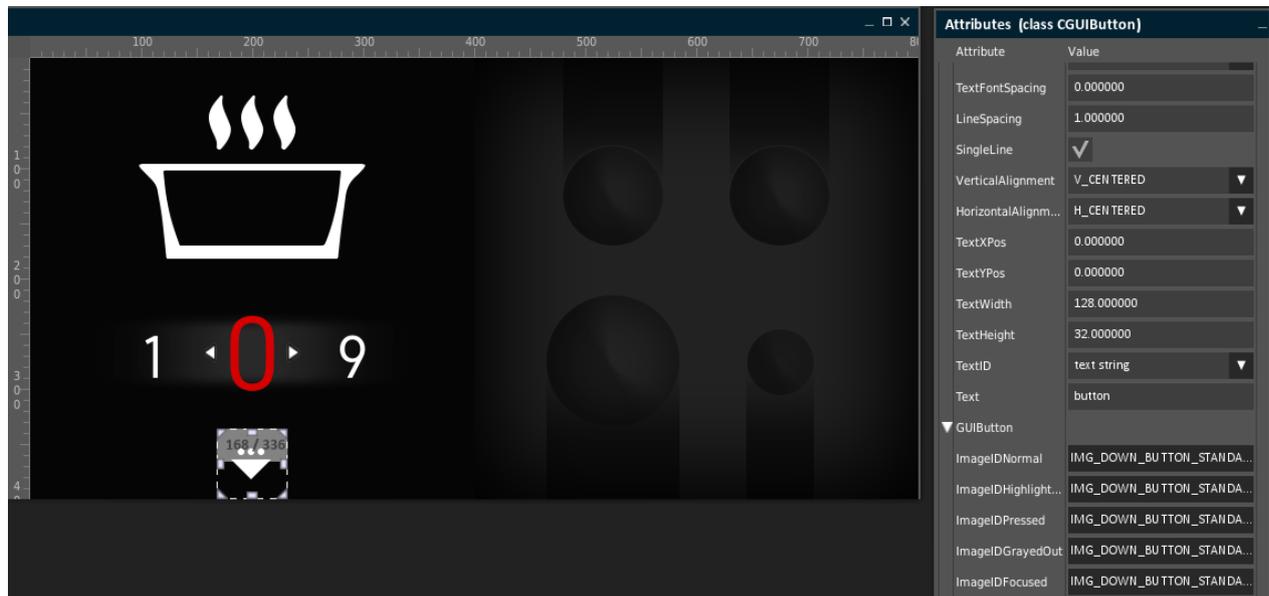


Fig. 7 Main with added button

▶ Save the project and continue with the next chapter.

## 2.5. Step 5: Run Simulation

Let us see, what we have done so far.

For this, we have to start the application. Inside GSE we call this “**Run Simulation**”.

- ▶ To start the application choose *File* → *Run Simulation...* .

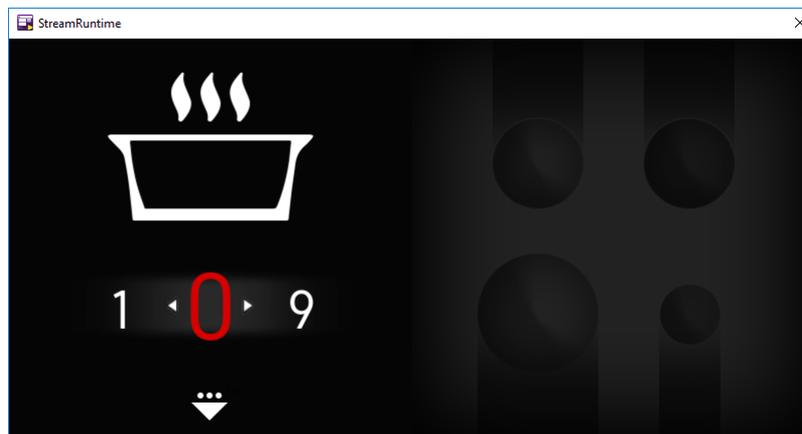


Fig. 8 Run Simulation

As you have noticed, the button has no effect. We cannot change the dialog.

One thing that you cannot see because of the black background is that there is still text in the button.

Even if the text is invisible for us, we should delete it.

But where is it?

- ▶ If not already selected, select the last added button (the uppermost in the “**Object Hierarchy**” window when the dialog “**Main**” is selected) named “**AID\_BUTTON\_2**”.
- ▶ Look for the attribute “**StandardText**” in the “**Attributes**” window (marked with a triangle in front of it to close the **StandardText**’s attributes).
- ➔ Below “**StandardText**” you will see the attributes for a standard text.

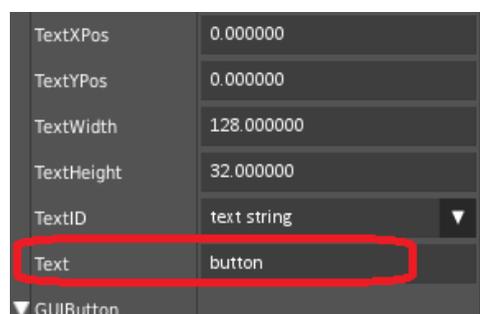


Fig. 9 Delete Text in button

- ▶ There you will find the attribute “**Text**”. Delete the content.
- ▶ Repeat this for the button (**AID\_BUTTON\_1**) in the “**Settings**” dialog.

The next thing we should do is to enable the changing between the two dialogs.

## 2.6. Step 6: Add commands in Main

Now we will add the transition between the two dialogs.

By clicking onto the arrow pointing downwards in the **Main** dialog, the dialog should vanish at the top and the new one should appear from the bottom.

To do this, follow the next steps:

- ▶ Save the project.
- ▶ Select “**Main**” in the “**Dialogs**” window.
- ▶ Select **AID\_BUTTON\_2** in the “**Object Hierarchy**” window.
- ▶ Look for “**GUICommand**” in the “**Attributes**” window.
- ▶ Select “**CMD\_DIALOG\_TRANSITION**” from the pull down menu.

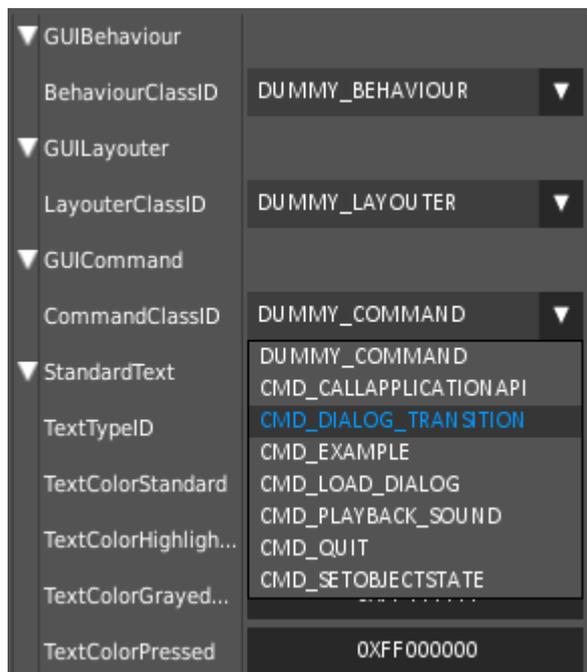


Fig. 10 Command Dialog Transition

- ➔ As you can see, several new attributes have been added to the “**Attributes**” window.

When a user clicks onto the arrow pointing downwards, we want the application to go to the setting page.

- ▶ Therefore we have to set the destination dialog by choosing “**Settings**” for the “**DestDialogFileName**”.

To do a transition between two dialogs the command also needs to know the source dialog.

- ▶ This will be done by setting the “**SourceObjectID**” to the Main Object ID: **AID\_MAIN**.

We have to specify which transition should be done. Therefore we select the appropriate type with the combobox behind the attribute “**TransitionType**”.

- ▶ Select “**PUSH\_FROM\_BOTTOM**” for “**TransitionType**”.

The other two attributes will not be changed for this project. Later, you can play with these settings and see what happens.

- ➔ The attributes for the transition command should look like this:

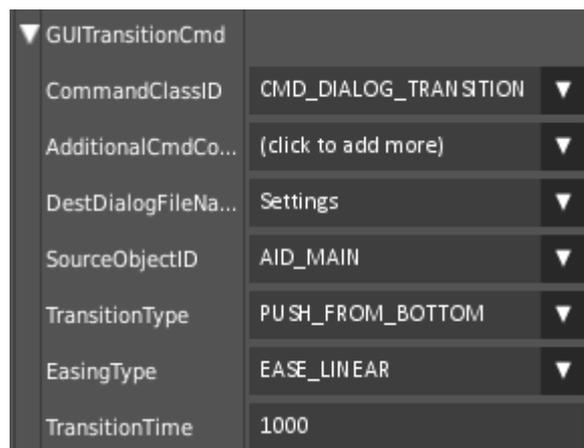


Fig. 11 Attributes Dialog Transition

- ▶ Save the project and run it.
- ▶ Click onto the “Downwards” button.
- ➔ The application changes to the “**Settings**” dialog.
- ▶ Close the application.

## 2.7. Step 7: Add commands in Settings

- ▶ Select “Settings” in the “Dialogs” window.
- ▶ Select `AID_BUTTON_1` in the “Object Hierarchy” window.
- ▶ Look for “GUICommand” in the “Attributes” window.
- ▶ Set “CommandClassID” to “CMD\_DIALOG\_TRANSITION”.

When a user clicks onto the upwards button, we want the application to go to the Main page.

- ▶ Therefore we have to set the destination dialog by choosing “Main” for the “DestDialogFileName”.

The command needs the source dialog, too.

- ▶ This will be done by setting the “SourceObjectID” to the Settings Object ID: `AID_SETTINGS`.
- ▶ Select “PUSH\_FROM\_TOP” for “TransitionType”.

➔ The attributes for the transition command should look like this:

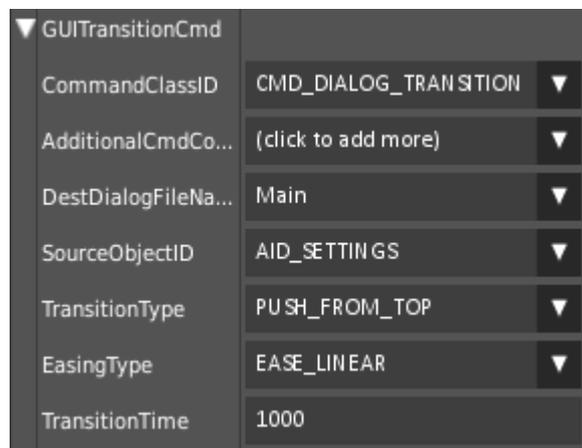


Fig. 12 Attributes Dialog Transition for Settings

- ▶ Save the project and run it (be sure, that Main has been selected as Start dialog).

Now you can change between the two dialogs.



When performing a transition to a new dialog, you will need to save the settings changed in the current dialog and set them when coming back to the dialog.

That's it. Now you know how to add a command to your project.

Please send us ([support@guiliani.de](mailto:support@guiliani.de)) an email and write if you like this step-by-step document or not – and why. Maybe you have some suggestions on how to enhance this guidance or maybe you have found errors – then we would be glad, if you send these to us, too.  
Thank you in advance.

## 2.8. Step 8: How to continue?

### 2.8.1. Sample solution

We hope this document has got you step by step from your first project out of the HowTo1 project to a higher level project using commands. If you encountered problems or wish to have the solution without creating the project on your own, we have added the sample solution into the folder called “How to 2 - sample solution” inside the documentation folder. Here you will find the GSE Project (step\_by\_step.gpr).

All resources you need for this HowTo will be found in the folder “*How to 2 - resources*” inside the documentation folder.



For Windows user inside the folder “temp” there is an executable StreamRuntime.exe.

### 2.8.2. Continuing HowTos

You will find an overview of continuing HowTos in the document “How to 0 - an overview of building GSE projects”.

Don't forget to visit our homepage [www.guiliani.de](http://www.guiliani.de) to get more information, demos, help, videos and the latest news about Guiliani and GSE.

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