Scene Wrappers and GUIs

This hobby report describes some topics that will be introduced with release "Fiat A" of the SrrTrains v0.01 project, by <yyyy-mm-dd>, eventually:

- Scene Wrappers
- GUIs

Some experimental Scene Wrapper GUI was already available with the former "official pre-alpha releases", e.g. with the "Fifth official pre-alpha release 0033.09bf2" by 2014-06-18 (please refer to https://www.mediafire.com/folder/edhwj4cacq0m5/SrrTrains-v0.01 to download the software).

Since then, the SrrTrains v0.01 project has existed in hibernation mode and had only "inofficial releases" without Scene Wrapper GUI.

Now, when we are going to start the project again (maybe), we want to have a next release – the release "Fiat A" –, which shall have all necessary parts including a Scene Wrapper GUI.

Some still missing functionality – and some missing architectural features – will be added by the release afterwards, by the "Arimathea" release (beyond 2020).

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1 The Envisioned Use Cases for Release "Fiat A"

The first step of the "Fiat A" project will be to **define a Testing Scene**, where all features of the SMUOS Framework can be tested within all of the following **six use cases**:

1.1 Use Case X – VR with Classic X3D Player

A classic X3D Player (e.g. BS Contact) will be used with an INTERNAL GUI to play in SINGLE USER VR MODE:

Figure 1: Use Case X

1.2 Use Case Y – Desktop VR with Classic X3D Player

An EXTERNAL GUI application will be written to play in SINGLE USER DESKTOP MODE:

Figure 2: Use Case Y

1.3 Use Case YNG – Desktop VR with WebGL Based X3D Player

Experience with WebGL will be gained and a Browser application will be written to play in SINGLE USER DESKTOP MODE:

Figure 3: Use Case YNG

1.4 Use Case XNG – VR with WebGL Based X3D Player

A WebGL based X3D Player will be used to play in SINGLE USER VR MODE:

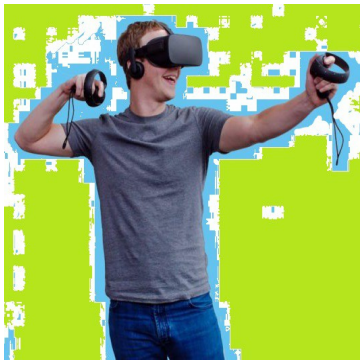


Figure 4: Use Case XNG

1.5 Use Case Z – Multiuser VR/Desktop VR with Classical X3D Player

A classical X3D Player and Collaboration Server (e.g. BS Contact and BS Collaborate) will be used for multiuser mode, mixing Use Case X and Y:

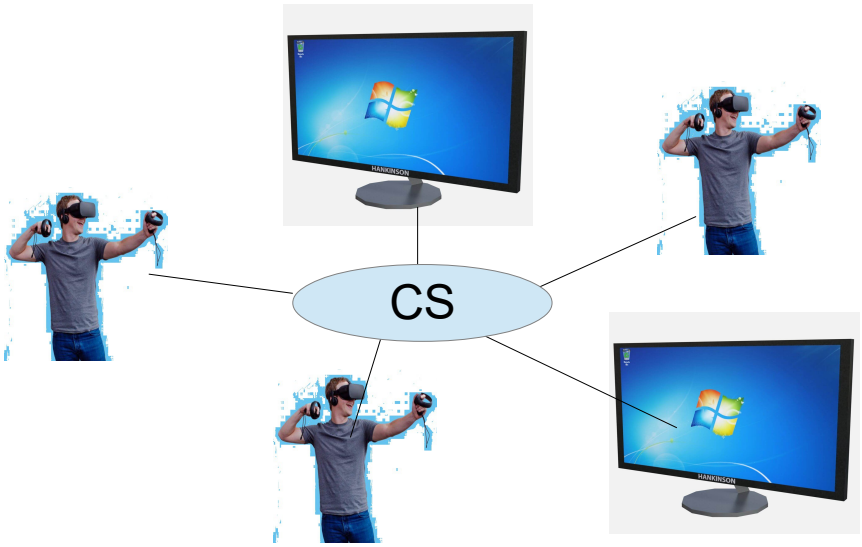


Figure 5: Use Case Z = X + Y

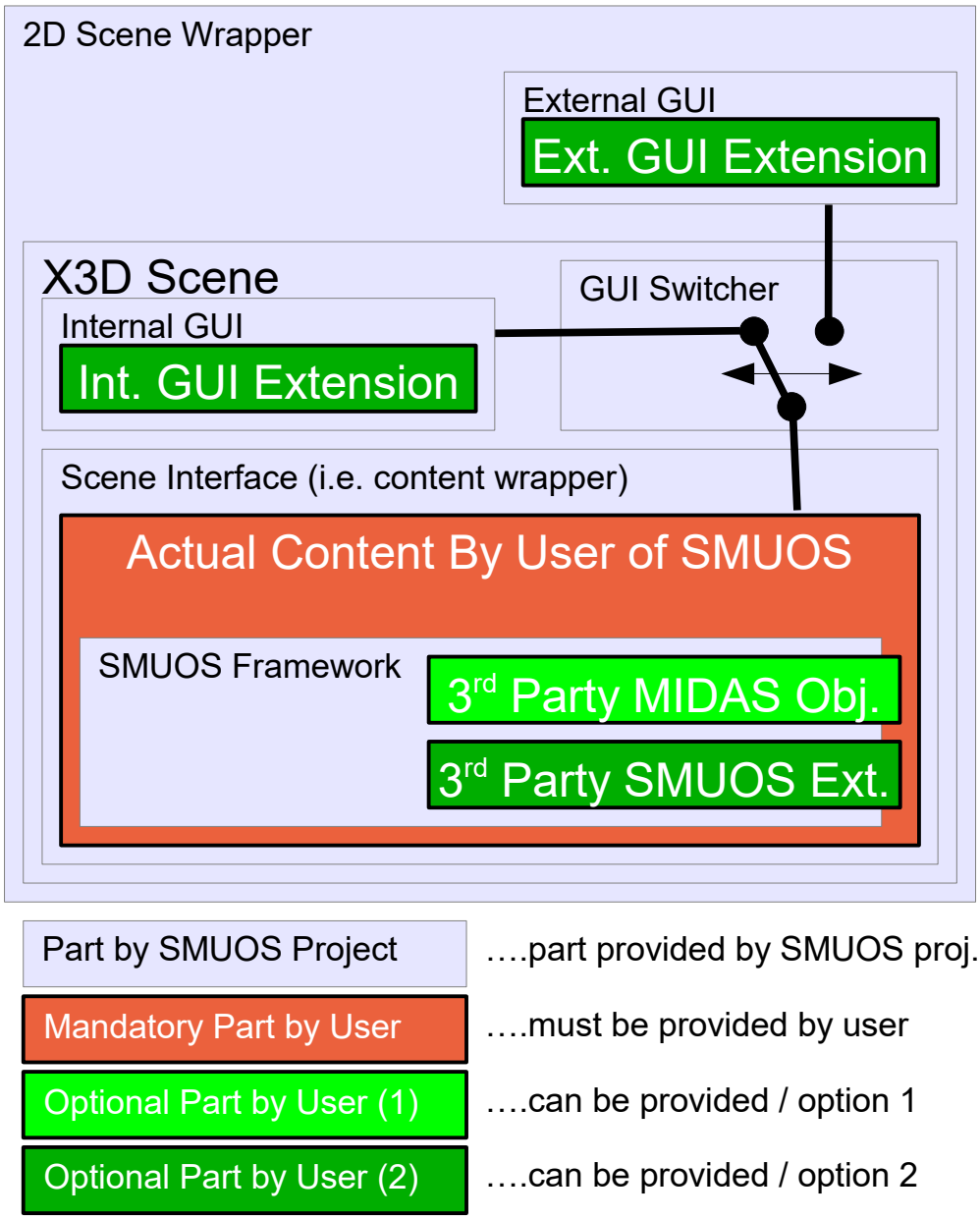
1.6 Use Case ZNG – Multiuser VR/Desktop VR with Any Set of Players

Classical X3D Players, WebGL Based X3D Players and an NG Collaboration Server will be used to play in MULTIUSER VR/DESKTOP VR MODE or even in MIXED REALITY MODE.

2 Scene Wrappers and GUIs

2.1 SMUOS Project (http://smuos.sourceforge.net)

The SMUOS Project could(!) provide all essential software that will be necessary to create – experimental – X3D based Simple Multiuser Scenes (SMS).



SMUOS could(!) specify all external interfaces, so following parts can be replaced by your own software: Scene Interface, GUI Switcher, Internal GUI, External GUI, 2D Scene Wrapper.

Only the SMUOS Framework itself will be essential to create SMS.

2.2 SIMULRR Project (http://simulrr.sourceforge.net)

The SIMULRR project could(!) be an example of a project that uses the SMUOS project.

The SIMULRR project:

- could(!) provide extension MIDAS Objects for Railway Simulations (SRR Objects)
- could(!) provide a new SMUOS Extension – the Train Manager Extension (TME)
- and the according internal and external GUI extensions