Target Setup for the STM32MP135f and other Linux based targets

This guide aims to explain how to setup a Linux based target for the Software Renderer Platform and how to build a player for this target. The guide was tested on the STM32MP135f but the setup should be similar on most other Linux platforms that support DRM/KMS.

Before you begin

Before starting with the setup guide, we recommend the following to get familiar with CGI-Studio:

- Explore CGI-Studio

  Read the Quick Start Guide.
- Learn to create SceneComposer Solutions
  The documentation provides instructions on how to create simple SceneComposer solutions. To access SceneComposer navigate to:
  <cgi-studio-installation-path>\bin\SceneComposer\SceneComposer.exe
- Generate Assets for Simulation and Target Environments
  You can find guidance on generating assets from solutions (binary files containing solution information for the player) for both simulation and target environments in the documentation.

With this knowledge you should be fit to complete this guide.

Target and build setup

For setup of the ST32MP135f-DK follow the guide provided by STM: Populate the target and boot the image - stm32mpu

For setup of the SDK (inside a WSL or Linux host PC) to build a player for the STM32 follow this guide provided by STM: Install the SDK - stm32mpu

Building the Player

tested inside an Ubuntu WSL:

1. source the SDK like described in the Install the SDK Guide from STM

2. within the root directory of cgi trunk:
    1. mkdir build && cd build
    2. cmake -DCMAKE_TOOLCHAIN_FILE="../cgi_studio_devices/src/SoftwareRenderer2D/ToolchainFiles/GCC-toolchain-STM32MP135f-DrmKms-Linux.txt" -DCGIDEVICE_EVDEV_INPUT_ENABLED=ON ../cmake/Candera/Player/ && make -j

The Player should now be built and can be uploaded to the Target.

Uploading Player and Asset file to the target

1. Connect an USB-C Cable to CN7 USB-C of the target to the host pc
2. Connect USB-C Power cable to the PWR USB-C port
3. After the device boots a ssh connection can be established to the device:
    1. ssh root@192.168.7.162 #the static ip address of the target
    2. It might be necessary to kill weston if it is still running. It NEEDS to be killed otherwise there will be a conflict with the Player over display access
4. Copy the compiled player and in Scene Composer generated Asset.bin file to the target (using WinScp or scp) and run them like so:
    1. ./Player Asset.bin

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