Hands-on workshop: RAMSES
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Agenda

- Where to get RAMSES?
- What is RAMSES?
- Why open source it?
- Demo
- Hands-on session
Where to get RAMSES

• Get RAMSES from GitHub repository:
  • `git clone https://github.com/GENIVI/ramses <path>`
  • `cd <path>`
  • `git submodule update --init --recursive`
• Install docker (Ubuntu)
  • `apt install docker.io`
  • `groupadd docker #can fail if already exists`
  • `usermod -aG docker $USER`
  • `#re-login or restart`
  • `docker run hello-world #optional`
• Build RAMSES docker
  • `cd scripts/docker`
  • `./build-basic-container.sh`
• Start RAMSES docker
  • `./start-basic-for-x11.sh` (on wayland-enabled systems: `./start-basic-for-wayland.sh`)
• Inside RAMSES docker
  • `./build-rames.sh`
  • `./run-unittests.sh #optional`
What is RAMSES?
Why open source it?

- Make collaboration with suppliers easier
- Hopefully benefit from contributions
- Long term:
  - Maybe establish as a standard
  - -> Larger community, better support, lower costs
- BMW will continue maintenance for next years
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- Inside RAMSES docker
  - `./build-ramses.sh`
  - `./run-unittests.sh` #optional
Run simple example

• In the docker container:
  • cd build/bin
  • ./ramses-example-local-client-XXXX
    • On X11: ./ramses-example-local-client-x11-egl-es-3-0
    • On Wayland: ./ramses-example-local-client-wayland-shell-egl-es-3-0
• Runs a renderer with a single triangle
• Both Client and Renderer are in the same application
Run distributed example

- Have to start three executables:
  - A renderer (does the OpenGL rendering)
  - A client application (provides the content)
  - A ramses daemon (connects client and renderer over network)
- Need three docker terminals to start each executable
- Open two new docker terminals:
  - Open a new terminal (tab)
  - docker ps
  - Copy the container ID
  - docker exec -it <container-id> bash
  - cd /home/ramses-build/build/bin
  - Repeat one more time in a new terminal
- Execute a renderer, daemon, and one example:
  - ./ramses-renderer-<wayland-or-x11>
  - ./ramses-daemon
  - ./<example-executable>   # e.g. ramses-example-basic-blending
Build workshop examples

- Open a new terminal (tab)
  - Not possible to modify the source tree within the container (read-only)!
- Checkout branch with examples
  - `cd <ramses-path>`
  - *If you want to code along:*
    - `git checkout tech_summit_examples_template`
  - *If you want to get the fully implemented code:*
    - `git checkout tech_summit_examples_implemented`
- Switch to docker tab and re-build RAMSES:
  - `<switch to docker tab>`
  - `./build-ramses.sh`
- *Example binaries will be in the /build/bin folder in RAMSES*
  - They are enumerated, e.g. 1_helloWorld, 2_cube, 3_...
Questions?

Thank you!

Visit GENIVI at http://www.genivi.org or http://projects.genivi.org
Contact us: help@genivi.org
Contact the RAMSES team: ramses@genivi.org

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