Senior Embedded Linux system Engineer

Thomas Perrot

Toulouse, France

+33 (0)6 29 30 55 43

thomas.perrot@tupi.fr

Blog | Github | Gitlab | GnuPG | Linkedin

Technical Skills

Operating Systems: Linux, OpenEmbedded, Yocto, Buildroot, RIOT-OS, Zephyr

Bootloader: U-boot, TF-A, at91, OP-TEE

Architectures: x86-64, ARMv7, ARMv8, PowerPC, RISC-V

Platforms: QorIQ, ARMADA, i.MX, STM32MP1, SAMA5, SAMA7, Tegra, U740, X280

Languages: ASM, Bash, C, Latex, Python

Version control: Git, git-repo, Kas

Tools: Jira, Gerrit, Qemu, GDB, Valgrind, Lauterbach, Saleae, Podman

Software Design: MDA, OCL, UML

Standards: DO178B DAL A, EABI, ISO C99, POSIX

Personal achievements

Volunteer open source contributor

Part time job to finance my studies

Master Degree with honor

Winner of the « 2009 IT night ».

Education

2011: Master Degree (5 years)

Architecture of critical and real-time embedded systems

2010: Master Degree (4 years)

Embedded and real-time systems and Modeling of software components

2009: Bachelor's degree of Fundamental IT

Languages

French: mother tongue

English: intermediate

Additional information

Linux technologist and free software enthusiast

Hobbies: arcade, CrossFit, IT, IoT, retro computing, robotics, trekking

Experiences

December 2020 - Present: Embedded Linux and kernel Engineer

Permanent job in **Bootlin**, Toulouse.

- Porting the Linux kernel and developing device drivers
- Integrating open-source components and building systems
- Contributing to upstream board support packages and device drivers

July 2015 - December 2020: Embedded Linux Engineer

Permanent job in **SIGFOX**

- Board bring-up and initial setup
- Board support packages, including bootloaders and kernels.
- Core system components such as boot processes, partitioning, OTA upgrades, and rollback mechanisms
- Security system components, including TPM, encryption, integrity systems, trusted boot, and measured boot

April 2014 - July 2015: Android System Integrator

Permanent job in **Intel Android SI NPI** on behalf of Celad & SHT, Toulouse.

- Introduce and maintain new Pre-silicon platforms under Android mainline.
- Publish releases, best know configurations and methods.
- Bring up, build, first boot and power-on support.

February 2014 - March 2014: ROS System Integrator

Permanent job in **Sogeti High Tech**, R&D, Toulouse.

- Design a embedded ROS node with ROSc for coOS.
- Design a custom ROS bridge for Unicom framework.

August 2011 - February 2014: Embedded system software engineer

Permanent job in **Airbus S.A.S** on behalf of Sogeti High Tech, Toulouse.

- Development and operation maintenance of primary flight control Airbus A380 and A400M.
- Embedded code WCET optimization and certification analysis.

February 2011 - August 2011: Research assistant / ROS System Developper

Temporary job of 5 months in **Office National Études et de Recherches Aérospatiales**, Toulouse.

- Design and implement with ROS a tool to simulate the communication between different software modules of heterogeneous critical systems.

October 2010 - February 2011: Internship / VHDL Processor Designer

Internship of 5 months in **Atelier Interuniversitaire de Micro-nano Électronique**, Toulouse.

- Design a 32-bit scalar pipelined RISC processor in-order Harvard architecture.

February 2010 - August 2010: Research assistant / Worst Case Execution Time Analysis

Temporary job of 6 months in **Institut de Recherche en Informatique de Toulouse**, Toulouse.

- Temporal analysis of parallel processus on multi-core processors.