Senior Embedded Linux system Engineer

Thomas Perrot

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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, AMRv8, PowerPC,

RISC-V

Platforms: QorlQ, 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 honnor

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.

Febrary 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.