

Jean PIHET NewOldBits.com 807 chaussee de Douai B-7504 Froidmont (Tournai) - Belgium	Birth date: 05th of March, 1973 Belgian - Married - 3 children E-Mail: jean.pihet@newoldbits.com Phone: +32 (0)478 94 35 41
Public profile available at http://www.linkedin.com/in/jeanpihet	

Skills

20 years of embedded systems development In depth knowledge of Linux OS architecture Contributions to the mainline Linux kernel [1] Contributions to open source software [2] Participation and presentations at Embedded Linux Conferences Porting and development of custom solutions Good understanding of HW design Partnership with Free-Electrons.com VinGauge.com Ability to work remotely and on site	<ul style="list-style-type: none"> → Highly focused on <i>Linux</i> and <i>open source</i> software → Kernel porting, Device Drivers development, Debug solutions → Power Management support, Profiling tools maintenance: Perf, Oprofile, Ftrace → Fosdem, ELC, ELCE, KS, LPC, Linaro Connect etc. → Board bring-up (bootloader, OS) Root Filesystem generation Performance Analysis and Optimisation Firmware Development → Schematics review, board rework → For development and training on embedded Linux → Product development (HW, SW, communication) and commercial launch → Remotely working since '07, in large and worldwide distributed teams
--	--

[1] <https://git.kernel.org/cgi/linux/kernel/git/torvalds/linux.git/log/?qt=grep&q=pihet>

[2] <https://github.com/jpihet>

Experience and references with top HW and SW companies:

Google - ProjectAra [3]	Linaro	Free Electrons
Acsa	Televic Healthcare and Rail	Mind.be
VinGauge.com	Texas Instruments	Philips NV
MontaVista	Marvell	Motorola

[3] <https://github.com/projectara>

Knowledge

Programming languages

- o C, Assembler
- o C++(OO)
- o Shell scripting
- o Python
- o Java for Android applications
- o Java JNI

μProcessors/μControlers - deep knowledge

- o ARM Cortex 32 and 64 bits
- o TI OMAP (730/2430/3xxx, 4xxx), Cortex A7/8, ARM9/11
- o NXP iMx7 multi processor communication
- o Cortex M4 (Stellaris, STM32), 68hc11/12 etc.
- o Xscale/StrongArm, PowerPC, MIPS

HW knowledge:

- o board schematics review
- o board debug and rework
- o SW bring-up based on the HW design (firmware, bootloader, OS)

Professional Experience

NewOldBits.com, Belgium (since 2010): Manager, Developer

- High quality **consulting activities**
 - * Linux kernel development, Linux porting to custom HW boards, System optimization,
 - * Power Management support,
 - * Profiling tools (Perf, Oprofile, ftrace ...) maintenance,
 - * Kernel Android enablement,
 - * Contributions to mainline kernel source tree,
 - * Custom board bring-up and drivers development (ALSA etc.),
 - * Firmware development,
 - * Remote and on-site consulting.
- **Google ProjectAra: Firmware development, hardware review and bring-up.** Communication with worldwide HW and SW teams.
- **VinGauge.com: Product development: HW, SW, communication.**
- **Linaro** assignee: development of profiling tools on ARM/ARM64,
- Remote development and **contributions** to the mainline Linux kernel: support for **Texas Instruments OMAP** chipsets: Power Management, Profiling tools
- Participation to **Embedded Linux conferences** (Fosdem, ELC, ELCE, LPC); various **presentations** and proposals on tracing, power management, PM QoS etc.
- **Partnership** with **free-electrons.com** for development and training sessions on embedded Linux

MontaVista Software, Santa Clara, CA USA (2007-2010) - Remotely from France and Belgium: Linux kernel developer

- MontaVista LSP **development and support:** Development and integration of new devices support into MontaVista products, Release of new code into the community source trees
- Linux kernel feature developer and enabler:
Co-maintainer of Linux profiling tools: PerfEvents, OProfile for ARM Cortex cores,

Board support and **Power Management** on OMAP3 chipset, supporting OMAP3 SDP, Beagleboard, EVM, Zoom I/II ... boards.

Motorola SA Toulouse, France (2004-2007): Software Architect and SW features integration - 2G/3G GSM platforms

- *Definition of hardware requirements for GSM integrated circuits, writing and review of detailed specifications, improvement proposals for future circuits and printed circuit boards,*
- *Definition of software architecture: requirements gathering, current software architecture study and impact evaluation.*
- *Contact with development teams: solutions proposal and approval, impact evaluation and implementation follow-up.*
- *SW integration drive, planning and follow-up.*

Projects:

- *Software architecture in the domains of: Power Management, Power-Up/Power-Down and GSM modes, Panics Management and Tools.*
- *Active support on: Linux kernel and applications, MontaVista development kit, licenses, NAND/NOR flash storage devices architecture and implementation, inter micro-processors and DSP communication.*

Coframi SA Sophia-Antipolis, France (2003 - 2004): Linux and embedded systems specialized consultant

Projects:

- *BootLoader on multi-processors platform OMAP730 at Texas Instruments France: development of new functionality, integration and stabilisation. Relations with development teams in Aalborg (DK) and Dallas (US);*
- *Linux port on OMAP730 platform (P2-Sample): kernel port, device drivers development for GSM, Ethernet, UART, LCD, keypad, Flash, DMA, Audio, debug tools, filesystems. Build scripts. Presentations and demonstrations to customers;*
- *Consulting on Linux architecture for next generation OMAP platform: Linux kernel, device drivers and Real Time solutions.*

Mind Linux Solutions, Leuven, Belgium (2001-2002): Embedded Linux specialized consultant

- *Porting, device drivers development, debugging solutions*

Projects:

- *Linux port on MIPS & IBM PowerPC405*
- *Linux and bootloader development on the Philips Pronto++/iPronto high-end remote controls at Philips Leuven(Intel StrongArm/Xscale): linux device drivers, debug solution, system build scripts, current consumption optimization, Java Virtual Machine interface (JNI) design*
- **Specialized consulting and customer support.**

Philips TASS, Belgium (1999-2001): Embedded software consultant.

Projects: Battery Management System as *Software Architect*; High-end set top box software:
Responsible for OS Integration (pSOS, **Linux on MIPS** processor) and debug support (JTAG).

Banksys S.A., Bruxelles, Belgium (1997-1999): Responsible of payment terminal software
(Proton smart card system). Software development, architecture and documentation.

Personal Experience

Operating Systems GNU/Linux: porting activities, mainlining, device drivers development, GNU Toolchain. Mailing list follow-up and support, mainline Linux contributions.

Electronic design and *integration* with software.

Antique vehicule restoration and maintenance of pre-60s Volkswagen.

Main personal projects

- VinGauge.com: *Automotive data acquisition system*: HW & SW design (firmware, communication protocol, Android application development).
- *3D printing and CNC machine* development, using open source HW and SW
- *Design* of a secure gateway connecting ADSL, Ethernet, WLAN 802.11 with Debian Linux on x86. Optimisation of power consumption and memory footprint.
- *3D Laser scanner* machine prototype: full development (HW, SW, detection algorithm etc.)
- *Linux port* on m68k, MIPS et Pentium, MicroBlaze. Graphical framework evaluation (X Window, Qt/Embedded, microwindows), network connectivity.
- *Linux device driver* for the Miro DC10 acquisition/playback card on PC.
- Integration of the *GNU GDB debugger* with custom debug hardware (JTAG interface).

Languages

French: Mother tongue.

English: Day-to-day practical experience.

Dutch: 5+ years day-to-day practical experience (*Comprehension - Written - Spoken*).

German: Notions (3 years evening course).

Education

Electronics & Telecom Civil Engineer ('97) at the *University of Louvain-La-Neuve* (UCL), Belgium.

Thesis: ' Design of a programmable, cryptographic digital integrated circuit for smart card'.

Domains: Telecom, Electronics, Micro-electronics, Cryptography.