**Bluetooth Embedded Software Engineer**

Summary

My experience is twofold: **Bluetooth** **software** and **Embedded software**.

In the last 15 years I have been developing and testing **Bluetooth software** for smartwatches, smartphones and Bluetooth headsets. Previously I acquired a wide experience in developing **Firmware** for embedded platforms, dealing with micro-controllers, RTOS, communication chips, software test suites, and new hardware bring-ups.

* Expert in **Bluetooth/BLE** architecture
* **Bluetooth/BLE** profiles and stack
* Firmware, Embedded software, Board bring-up
* Communication Protocols (ATM, ISDN, SPI, I2C)
* Languages : C/C++, Assembler
* **Testing/Debugging** of embedded systems
* **Real Time** Operating Systems
* Linux/Android based systems
* Coordination of software team
* English (fluent), Spanish (fluent), French (native)

Work Experience (25+ years)

[**SoftInova**](http://www.linkedin.com/in/jeanregisferraton) **Freelance Software consultant** Barcelona / Nice 2010 - present

Baylibre (2017-2018) Villeneuve Loubet

1. I developed a BLE interface for connected glasses, integrating the HCI/SPI interface for the ST BlueNRG chip.

Intel (2016-2017) Sophia Antipolis and (2010-2011) Toulouse

1. I integrated and developed the Bluetooth and BLE connectivity in smartwatch and smartphone platforms.
2. I analyzed the Bluetooth/BLE and HCI issues, creating patches and bugfixes, optimizing the overall performance.
3. I managed Bluetooth integration, testing and debugging under Android, Linux kernel and Bluedroid/Bluez stack.

Telefónica I+D (2012-2013) Barcelona

1. I integrated a Wifi router (under Linux) implementing bandwidth sharing and aggregation from multiple access points, to deliver higher connection speeds.

Trafficnow (2011-2012) Barcelona

1. I developed Bluetooth-based traffic systems, integrating Bluetooth, GPRS and GPS devices.

[**SouthWing**](http://www.southwing.com) **Software engineer - Bluetooth architect** Barcelona (Spain) 2002 - 2009

Software design of Bluetooth systems

1. I developed Firmware for Bluetooth products: mono / stereo Headsets and car kits.
2. I acquired a strong Bluetooth expertise, with in-depth knowledge of the protocol layers and Bluetooth profiles (HS/HF, A2DP/AVRCP).
3. I attended the 25th **Bluetooh SIG Unplug Fest** (Oct 2006, Malta), working with major Bluetooth companies.
4. I managed the certification of Bluetooth products and Interoperability testing: analysis and debugging with BT analyzer.

Software team coordination

1. I managed the software team, dealing with projects and tasks follow-up within R&D department.
2. I participated in investigation, evaluating and implementing innovative solutions for future products, co-writer of patents.
3. I created an internal “C programming standard” and managed the Version control software.

Development of production software for Bluetooth systems

1. I developed the production software tools (C/C++, Windows), focusing on optimizing the manufacturing process.

[**ADETEL**](http://www.adetelgroup.com/) **Software / Firmware engineer** Lyon (France) 1991 - 2002

CSTI, EOLRING (2 years) Development of ATM firmware

1. I defined the ATM board architecture (hardware/firmware/asic) with its communication interfaces
2. I developed the Firmware for an ATM controller at 155 Mb/s, featuring ABR traffic, OAM functions, PCI interface

ASCOM Monetel (2 years) Development of ISDN communication products

1. I implemented the **PCM R2 protocol**, for switchboards, after porting the **real time kernel pSOS+** on new hardware.
2. I specified the software blocks using **SDL** **specification** (Specification and Description Language).
3. I developed the validation software (ISDN level 1) to comply with CNET, ETSI and ITU-T standards

Other customers Board bring-up, Software test suites, RTOS drivers

1. **CETIA:** I developed software test suites for CPU boards and communication chips (Ethernet, SCSI, 68030)
2. **CENTRALP, SECRE**: I developed the Firmware for VME graphic boards (TMS34020), and real-time OS9 driver.
3. **ATMEL**: I developed the firmware (ARM7 processor) for a USB “FingerChip”, for fingerprint recognition.
4. **SIEMENS, THALES:** I implemented **VxWorks drivers** for an HDLC radio link and graphic driver (UGL & ZINC layers).

**HENNSON** **Software Development Engineer - CAD/CAM dental system** Vienne (Fr) 1989 - 91

1. I developed a task supervisor for processing station (C, 68020, VME bus, transputers) and communication software.

**GIXI** **Test Engineer** Lyon (France) 1985 - 1988

1. I developed software test suites (C language & 68020 Assembler), designed for hardware testing of graphic terminals

**Theyssel** **Software Development of measurement system** Grenoble (Fr) 1983 - 1985

Software skills

Software Design **Firmware**, **RTOS**, drivers, Windows DLL & Drivers, SDL Software specification

Languages C/C++, Assembler (Power PC MPC8260, **680X0**, MIPS R4001, **ARM7**, TMS34020)

Real Time OS **Zephyr**, **ThreadX**, **VxWorks**, **pSOS+**, OS9

Linux stuff **Android, Linux** kernel, Ubuntu, Meego, Bluedroid/Bluez stack

Cross-Compiler/debuggers Tasking/CrossView (R4001), Cosmic & Microtek (68xxx), ARM Developper Suite (ADS)

Development Tools GCC, Jenkins, BlueLab, Tornado, Borland C/C++, Visual C++

Version control GIT, Gerrit, Subversion, Visual SourceSafe, CVS

Operating System Linux, Unix, OS9, Windows

Protocols

Bluetooth Protocols **Bluetooth** and **BLE** protocols (LMP, SDP, L2CAP, RFCOMM, AT commands), **HCI** interface

Bluetooth profiles GATT, Headset, HandsFree, A2DP & AVRCP

ATM protocol **ATM** (transport ABR, CBR, VBR, OAM), Ethernet

ISDN protocol **ISDN**, Signalization PCM R2

WIFI protocol

Bus & interfaces VME Bus, PCI Bus, Interfaces SPI, I2C, SCSI, USB, Uart/RS232

Electronics skills

Microprocessors **Motorola MPC8260** (PowerQuicc2), **680X0**, 68331 y 6809, **MIPS** R4001, **ARM7**, TMS34020

Micro-controller Motorola 68331, Intel 80C188

Bluetooth Chips **CSR** BlueCore (BC2, BC3, BC4, BC5), **Broadcom** (BCM4343, 2044), **RFMD** SiW3500, **ST** BlueNRG

Analyzers **Bluetooth Analyzers** (Frontline, FTS, PTS), **Protocol Analyzers** (ATM, ISDN, USB)

Hardware tools **Emulators** (ARM7, 68xxx), Oscilloscopes

Education

C U S T – Clermont-Ferrand (France) – Electronics Engineer (1982)

Languages

English Excellent, negotiation level

French Native language

Spanish Excellent, negotiation level

Catalan Good, conversation level

Various

Yoga teacher Yoga training in India and Barcelona (2016-2018)

Hobbies Yoga, Cycling, hiking, cinema, travelling