# SEBASTIEN COURTIN (Born 05/05/1980 in Migennes-89)

Design office technician
Electronics, Acoustics and IT.
17 years of engineering experience. (Vae)

# PROFESSIONNAL AND PERSONAL EXPERIENCES.

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# PROFESSIONNAL EXPÉRIENCE \_\_\_\_\_

#### **2009-2020 ENTREPRENEUR.** Creation of an electro-acoustic design office.

Transdisciplinary expertise in different innovative markets:

#### Acoustic expertise:

Legal analysis of non-compliance in the face of neighborhood disturbances in collaboration with legal experts. Comfort analysis listening to reception rooms.

#### Electro-informatics expertise:

Feasibility expert for the Cap'tronic association dependent on ministry of Industry. Over 200 repair projects.

#### <u>Subcontracting in study and development:</u>

Research and development for the Medical, Military, Nuclear, Space. Instrumentation and special machine for laboratory and production lines.

#### Teaching:

Outdoor teacher in physic and acoustic measurement in signal processing. (Fac and lut) Applied mathematics programming with Matlab and Labview. (Python & C ++, migration in progress)

#### 2008-2009 Training in business creation.

Business creation in agreement with the CCI and experts in the region.

2008 Sound and Light Systems. Repairer of show equipment.

**2007 RNS-ENGINEERING.** Active noise reduction - consultant and designer.

#### Prototyping and CAD for ANC:

Integration of maps into BGA Knowledge transfer.

2006-2007 MATERIAU INGENIERIE. Expertise - calibration – retrofit.

2003-2006 SONALYSE, vibro-acoustic control.

Senior technician in design office.

Creation of recorders for vibro-acoustic expertise: 8051, C language programming and embedded USB driver writing.

# PROFESSIONNAL PROJECTS

#### SX-100 vibrations conditionner.

Mixed design prog 8051 C language and redaction of Embedded Usb driver. (Enum)

Fig. 1: SX-100.



#### Analyzer controller.

Audio processing motherboard for active noise and vibrations control in an industrial environment.

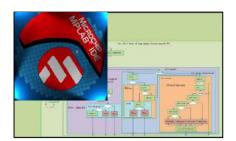
Fig. 2: 333MHz audio processing card.



#### Military code analysis.

Pic assembler analysis on mine detector.

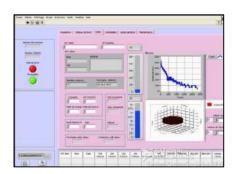
Fig. 3: PIC Algorigram.



#### Feasibility expertise.

Setting up an expertise report Cap'tronic in view of AFT. Arduino to Labview: Physics, sensor, analog, lot, lp, Server, console.

<u>Fig. 4: IP remote monitoring software, alert management and performance.</u>



#### Multi OS developments.

Drafting and implementation of codes drivers, apps and libraries at classics OS like: Windows, Linux, Android, FreeRtos.

Fig. 5: Supported OS.



# PROFESSIONAL PROJECTS (continued)

#### **Psychoacoustics Developments.**

Customized application developments of measurement, analysis & recognition statistics and psychoacoustics. Labview.

Fig. 6: Descriptor analysis software.



Creation of your automation for your production lines.

Fig. 7: Management of production lines.



Creation of analysis software and signals processing with KNN mapping.

Fig. 8: School analysis software.

#### Aging enclosure.

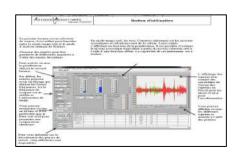
Realization of management software for CompacRio, Fpga, National Instrument Over Ethernet for CEA of Saclay.

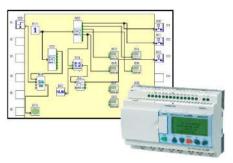
Fig. 9: Process and security.

#### **ESXi Hypervisor infrastructure.**

<u>Beginner assistant</u> in setting up and managing virtualization servers and Datastore, ISCSI, Raid on Freenas, OMV and Synology.

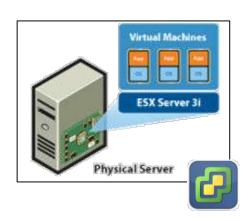
Fig. 10: Use of remote virtual machines.











# PROFESSIONAL PROJECTS (continued) \_\_\_

#### IP camera in irradiated area.

Realization of the network infrastructure for controlling and viewing cameras of dismantling Phenix Marcoule.

Design using six languages and five protocols Management of video streams in C #, creation of On-the-fly networks, server token management ten multicast clients, control over Telnet of the Poe switch, control in C over Modbus of robot movements from remote control under Debian.



Fig. 11: Automated video infrastructure.

#### Water purity analyzer for the ISS.

R&D photosensitive sensor and Hydraulics Controller on Stm32 board. C++ language Accuracy: 1 RLU @ 100 fA.

Fig. 12: Biowyse project.



#### **Technology transfer for Clinical Institute.**

Schematization to Pcb and drafting of embedded program for Microchip.
Control in C language of a BM70 Bluetooth module. Drafting BT descriptors and characteristics. 24bit 200khz converter Interface, (19 effective)

Fig. 13: Clinident Project.



## SCHOOL JOURNEY

2020 – Validation of prior learning for the *electro-acoustic master* level *II.* UNIVERSITY of MONTPELLIER II

2003 - DUT *Electronic Engineering and Industrial Computing.* UNIVERSITY of MONTPELLIER II

2000 - BAC F2 *Electronic Engineering*. LYCEE DHUODA in NIMES

1998 - *Electronic* BEP CAP *connectors and control*. LYCEE JULES RAIMUE in NIMES

## PROFESSIONAL TRAINING

#### Seminars:

- Electromagnetic-PCB compliance, Radio frequency link, Antennas, RF identification and PSOC components.
- Smart objects: technologies and market opportunities.
- CE marking.
- Indoor Geo-Location.
- Protection of embedded software.
- Unified object modeling language UML.
- Electronics at the service of Smartcity.
- Discovering power supplies.
- Electronics in smart buildings.
- Discovering power supplies.
- Applications of Artificial Intelligence on Silicon and Data Processing Algorithm.

#### Workshops:

- Artificial intelligence under Python.
- IT and security the basics of Hacking. (Cybersecurity)
- Implementation of Yocto IOT embedded Linux.
- Practical development workshop on ARM Cortex M3, Stm32, FreeRTos architecture.
- Linux kernel and driver development.
- Android development.
- C code reliability, Versioning.

Recording campaigns in industrial environments: Creation of (sound) databases for analyzes such as those carried out for the RENAULT, SHEINDER and HPI companies.

For more information download our brochures or visit our internet sites.

http://www.astuces-acoustiques.com/CV-Plaquettes/ http://www.spectral-decisions.com/