

Curriculum Vitae

Antoine ELBEL



In a nutshell:

1. Master of Science, 18 years in software development.
2. Long experience in analysis, design, development, testing and implementation of applications for industrial, medical instruments domain and desktop applications.
3. Strong exposure to object-oriented design, software architectures, design patterns, test-driven development and agile practices.
4. Area of expertise: the .net platform with c# and native development in C/C++.

Personal Information

- o Date of Birth: 26 June 1976 in Strasbourg, France
- o Civil Status: in Partnership, 2 children (2006 and 2009)
- o Nationality: French
- o Swiss Residence Permit: C
- o Level of Employment: 80% to 100%

Education

2007-2009 [Berner Fachhochschule](#) – CH

Master of Advanced Studies in Information Technologies
(continuing education while working)

1997-1998 [University Of Nottingham](#) – UK

Master of Science in Electronic Engineering

1998-2000 [Université de Nancy](#) - Fr

English Language and Literature Degree (2 years)

1996-1997 [University Of Central Lancashire, Preston](#) - UK

Bachelor of Science (Hons) Applied Physics
(Erasmus exchange)

1994-1996 [Institut Universitaire de Technologie Pasteur, Strasbourg](#) – Fr

Degree in Industrial Engineering
(DUT Génie Industriel et Maintenance)

1993-1994 [Lycée Fustel De Coulanges, Strasbourg](#) –Fr

Baccalauréat in science (Math- Phys- Chem.)

Work Experience

02.2007 Software Engineer @ Bernafon AG in Bern

Role: Development of a desktop software for a hearing instrument company that stores patient medical records, calculates optimal sound generation, tunes hearing aids amplification and programs the physical hardware. I have developed a strong expertise in managed and native software development on Windows but also good understanding for the field of audiology (hearing loss measurement, the mathematical model for the simulation of hearing instruments, the communication layer to the instrument using USB or Bluetooth).

My responsibilities include:

- Windows desktop development using the .Net framework, c# as a language, visual studio as an IDE, TFS as a central build system, TFS and Git for version control.
- Design and Implementation of algorithm and specific business logic components (simulation of acoustics, configuration database)
- Well versed in the following technologies: UML, XML, MEF, LINQ
- Many years of experience in asynchronous and distributed programming (multi-threading, experience with COM, socket, web-services, and WCF)
- 4 years in an agile setup: responsibilities in item breakdown, effort estimations and SCRUM master deputy.
- Maintenance and improvement of legacy application in C++/Qt
- Close collaboration with requirement analysts, software architects, and DSP engineers to define interfaces and levels of abstractions in the APIs.
- Used to work in a regulated environment for medical devices: quality control, risk management, peer review, specification, design and test documents...
- 3rd Level support, troubleshooting and issues analysis coming from released products.

10.1998 to 01.2007 Hardware and Firmware Engineer @ De La Rue Cash Systems in Bern and Portsmouth-UK

Role: Hardware Design and Software-Firmware Development from real time embedded Systems for automatic cash recycling safes.

Design of Algorithms, sensors and Firmware for the counterfeit note detectors (using essentially UV, IR Illumination, and magnetic signature).

Control of complex mechatronic machines.

Responsibilities:

- Specifications and interface definition for outsourced development or internal integration.
- Software design (Motor and solenoid valve control unit, jam detection, signal processing).
- Electronic Hardware Design (microcontroller, sensors and motor drives).
- Test-Applications.

- . Engineering contact person for the product support department.
- . Commissioning of prototypes.

Languages

German										
English										
French										

Publications & Awards

- o Inventor of a Patent (2006) in the domain of controlling and driving an electro-mechanical device. [US 20090134262 A1](#)
- o Co-winner of the Swisstopo innovation award (2010) for the result of the master thesis, [e-geo innovations preis 2010](#), "Simplification de la publication de données par géoservice"

Interests and activities



Hardware and software «Pet project» for central heating control with a Raspberry PI.



Run 10km twice a week and occasionally go mountaineering in the Bernese Oberland or in Wallis.



Help occasionally on the family farm in Alsace.

Start Date

January 2018.

References

References will be made available upon request

Annex to the Curriculum Vitae

Skills Matrix

	Experience	Exposure
Language		
C#	4 years	Daily
C++	10 years	Daily
Powershell	3 years	Monthly
Framework		
.NET 1.0-4.5	4 years	Daily
Qt	7 years	Monthly
Boost	7 years	Occasionally
Design Methodology and Tools		
UML (Magic Draw)	8 years	Monthly
OO Design	10 years	Weekly
Development Environment		
Visual Studio 2015	10 years	Daily
Version Control		
Team Foundation Server (TFS)	5 years	Daily
Clear Case	-	Dated
ExamDiff (three ways merging)	7 years	Daily
Bug Tracking		
TFS	5 years	Daily
Rational Quality Manager	1 year	Daily
Test Track Pro	5 years	Daily
Effort Estimation and Sprint Planning		
TFS	5 years	Occasionally
Jira	2 year	Daily
Development Processes		
DOORS (requirement tool)	9 years	Monthly
System Requirement Analyst	9 years	Occasionally
Scrum	4 years	Daily
Change Management	8 years	Monthly
Testing (system, integration, and unit)	9 years	Weekly

Broader engineering expertise		
Audiology and acoustic know-how		Daily
Mechatronics: Transducer Dimensioning and HW driver(power and torque requirements for DC, brushless, stepper Motors)		Rusty
Electronics and Hardware skills: Long experience in the design and implementation of communication protocols over: RS232, IIC, CAN, SPI and shared memory		Occasionally