

Ferenc Valenta

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WORK EXPERIENCE

2005 – 2011 **Senior Embedded Software Engineer**, Mentor Graphics Hungary Ltd., Budapest
Automotive Network Design business unit

Development of software modules for vehicle communication networks

- CAN, LIN and VLite drivers, protocol stacks
- Transport layer, network management and ISO14229/ISO14230 diagnostics modules
- Bootloaders (ISO SWDL, Volvo D2, KWP2000, SAIC)
- Configuration tools and internal tester applications (C++)

Hardware development

- Analog and digital schematics design
- PCB design (Protel/Altium, PCAD, Eagle)
- CPLD/FPGA design in Abel and VHDL
- From simple internal test tools to highly integrated, FPGA based multi-protocol testers (VCT3000, Tellus, LIN Spector)

Customer support

- Product support, integration help, customer training by phone, email and on-site (whole Europe, China, Korea)
- Emergency problem solving at the production line in production stop cases

General

- Project management
- Testing, documentation

2002 – 2005 **Hardware/Software engineer**, Wolf Medical Ltd., Budapest

Development of intelligent home ECG system (<http://www.cardy.hu>)

- Hardware design (from the precision analog frontend to the digital system)
- Firmware development (measurement control, flash filesystem, IrDA and Bluetooth communication stacks, graphical user interface, license cryptography)
- ECG processing algorithms (IIR filters, HP peak detection, R-wave detection, data compression etc...)
- Production start and supervision, problem solving

2000 – 2002 **Hardware engineer**, Prolan Co., Budapest

Development of the ProStandard industrial calibration equipments

- Design of high power switch mode amplifiers and power supplies

PROJECTS

1998 **VSS Sound Card for Amiga computers** <http://amiga.resource.cx/exp/vfsoundsystem>
The first hardware mp3-capable sound card for Amiga

Hardware design

- CPLD, DSP, audio codec, analog circuitry
- CPLD firmware development in Abel

Software development

- GUI configuration and management tool
- drivers (AHI/mpega/melody)

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2002

Digital Master system for music cassette production

Capable of replaying 4 tracks simultaneously at 128x speed

Hardware design

- PCI card using the memory of the host machine through scatter/gather DMA, powered by 2 CPLDs
- CPLD firmware development in Abel

Software development

- Windows 2000/XP WDM kernel driver

EDUCATION

1995–2000 ELTE TTK Geophysics

1997-2002 BME VIK Informatics

LANGUAGES

English (fluent), German (read only)

SKILLS

- Knowledge of CAN standards (ISO15765, ISO14229, ISO14230, GGDS etc...)
- Knowledge of LIN standards (1.2 - 2.1)
- C (MISRA), C++, Abel, VHDL, Lisp, assembly
- Static analysis tools (Lint, QAC, LOC)
- Debuggers (Trace32, UDE, **XDS510**, and lot of others)
- Experience with many 8-32bit embedded systems (Freescale: HC08, Star12, PowerPC, MC68000, Dragonball (ARM9), Renesas/NEC: 78k, V850, SH2, M16C, M32C, M32R, MIPS, **Texas Instruments: C2000**, TMS470, MSP430, Amel: AVR, ARM7)
- Canalyzer, Kvaser, LIN Spector
- Schematics/PCB design (Protel, Altium, PCAD, Eagle)
- FPGA/CPLD design (Xilinx, Lattice)

TRAININGS

- MISRA C (PRQA)
- ISTQB Certified Tester
- Flexray
- RapiTime
- Eclipse

OTHER

- Driving licence (B)