Christophe Delord – R&D software engineer

Personal data

Christophe Delord

Toulouse, FRANCE
web: cdelord.fr – https://cdsoft.codeberg.page
Codeberg : https://codeberg.org/cdsoft
~~github: https://github.com/CDSoft~~
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51 year old – born in 330.5 PPM

Experience

Computer science

Computer Science Engineer
Post Graduate Degree in Artificial Intelligence
ENSEEIHT
27 year experience (artificial intelligence, embedded computers, real time, avionics, automotive, R&D, Open-Source...)

Technical Skills

Functional languages	Haskell, OCaml, LISP
Logic languages	PROLOG
Imperative/object languages	C, Lua, Python, C++
Low level languages	assembly, 80x86, SHARC, PowerPC, PIC32
Script languages	Bash, Perl, Python, Lua
Operating systems	UNIX, GNU/Linux, Debian, Fedora
Version control	Git
Documentation	Markdown, reStructuredText, Pandoc, LaTeX, HTML
Safety-critical standards	DO-178B (avionics), ISO 26262 (automotive)
Open Source	LuaX (programming language, libraries), bang (build system), ypp, panda (text preprocessing), tpg, sp (parser generators)...

Experiences - free softwares

Actor model	Designing safety critical real-time systems with actors in LuaX and C
Modeling and simulation	Usage of functional programming (Haskell) to model and simulate critical real-time systems
Belenos	**Model checker in C** - basic model checker that simulates the execution of a system model written in C.
BonaLuna, LuaX	**Compact Lua extension** - multi platform (GNU/Linux, MacOS and Windows), C and Lua
bang	**Ninja file generator scriptable in LuaX** - Lua
PP, ABP, Panda, UPP, ypp	**Text preprocessor** designed for Pandoc, Markdown and reStructuredText written in Haskell and Lua
Modelling/simulation	**Modeling, simulate and verify critical real time systems** with functional languages (Haskell)
Personal web site	written with Markdown, Pandoc, bang/ninja and LuaX
TPG, SP	**Syntactic parser generators** - Python
PyLog	**First order logic and PROLOG in Python**
PopF	**Unsolicited Emails Filtering** - Bayesian filter, POP3 proxy, Python

Patents

Dec. 20, 2019

Method and system for handling blind sectors of scanning layers of redundant sensors in a vehicle. See patents.google.com or patents.justia.com

Professional Experience

Feb. 2017 - ...	**EasyMile.**: Real-time embedded software, Sensor and environment simulation (C, Haskell, Lua, Python, Ethernet, CAN, Linux)
Studies	**Sopra**: usage of functional languages (Haskell, OCaml, F#) to model real time embedded systems
	Genetic algorithms applied to automatic unit test generation
Aug. 2015 - Jan. 2017	**Sopra**: real time simulation
	Airbus: real time simulation for flight computers integrated to the global A380 simulator (Simics, Power PC, Linux, AFDX)
Sept. 2014 - Jan. 2017	**Sopra**: Flight tests
	Airbus: Wi-Fi network optimisation, Real time Linux OS, update of the acquisition and analyzing system of the flight recorded data
Feb. 2014	**Sopra**: Experimentation with Microchip PIC32
Jan. 2015 - June 2015	Airbus: study of a real-time architecture for flight test data acquisition modules (PIC32, clock synchronization)
	Sopra Spain, Fermax (Valencia): Feasibility study of a VoIP intercom
Oct. 2013 - Mar. 2014	**Sopra**: Qualified ARINC 665 load generator
	Thales Avionics: Design and code in C, Generic data formating system

Sept. 2012 - Aug. 2014	**Sopra**: Real-time modular test bench (configurable by Python scripts) Thales Optronique: design, code and tests. Real-time kernel in C++ (Windows, RTX), generic I/O modules, configuration and behaviour of the kernel and modules in Python (embedded interpreter)
Apr. 2012 - Oct. 2012	**Sopra**: Onboard Maintenance System (OMS) simulator, DO-178B, Python Liebherr Aerospace: design, code and test of an OMS (ARINC 604 simulator in Python, ARINC 429 interface), Python scriptable test environment, LRU simulation for validation purpose, automatic documentation generation in Python and reStructuredText (Sphinx, test results, traceability)
May 2001 - June 2014	**Sopra**: real-time embedded software, D0-178B Liebherr Aerospace: assisted unit test generation in Python for RTRT Thales Avionics: A320 Flight Control computer, specification, design, code, tests Airbus: A380 and A320 Flight Control computer, specification, design, code, tests (France, training of an Indian team) Airbus: microprocessor simulation (Python, graph, WCET computation, stack analyzer) Airbus: safety studies
Oct. 1998 - May 2001	**Sopra**: CNRS, Pierre Fabre Laboratories: databases

Education

1997 - 1998	**ENSEEIHT - IRIT**: Post Graduate Degree in Artificial Intelligence Publication: Speech acts and dialog games (Colloque Intelligence Artificielle et Complexité, Université Saint Denis, Paris VIII)
1995 - 1998	**ENSEEIHT**: Computer Science Engineer

Langues

French	Native Speaker
English	Intermediate