

Nicolas Morey-Chaisemartin

Embedded Software Architect / Developer

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29/06/1986

Work Experience

- April 2015 **Network solutions manager**, *Kalray*, Montbonnot.
upto March 2017
- Conception of a 80Gb/s smartNIC product
 - Port and optimization of **OpenDataPlane** on MPPA.
 - Management of a 5 engineer team
 - **High-speed PCI and Ethernet** interfaces support
 - In charge of all Linux drivers: **PCI, netdev, AF ALG, crypto, RoCE, DPDK**
 - Environment: MPPA, C, ODP, Ethernet, PCI, **Linux Drivers**.
- July 2013 **Video solutions manager**, *Kalray*, Montbonnot.
upto April 2015
- Design and development of a flexible **HEVC** core encoder optimized for MPPA
 - Technical leader and management of a small development team
 - Port, parallelization and optimization of MainConcept 4K **HEVC** encoder on MPPA
 - Environment: MPPA, C, C++, Ruby, Parallel programming, HEVC.
- July 2009 **Embedded software architect and developer**, *Kalray*, Montbonnot.
upto July 2013
- Development of an embedded operating system and runtime libraries.
 - Development of a front-end **compiler** for a highly parallel streaming language.
 - Development of **scheduling, placing and routing** tools for streaming applications
 - In charge of **continuous integration** using Git/Hudson.
 - IT Co-administrator.
 - **Agile/Scrum** Project Management.
 - Environment: **Embedded systems**, MPPA, C, Assembly, Ruby, Parallel programming.
- Octobre 2008 **Embedded System Engineer**, *Coframi*, Meylan.
upto July 2009
- Consulting for Bull in the R&D HPC Team: **Infiniband** expert.
 - Development of fault-tolerant **routing algorithms** (patents).
 - Development of network monitoring solutions for large clusters.
 - Environment: Infiniband, Routage, QoS, **Linux drivers, HPC**.
- May 2008 **MSc Project**, *Northumbria University*, Newcastle, UK.
upto September 2008
- Design and development of a **hard real-time micro-Kernel** for the Cell Broadband Engine.
 - Environment: **Multicore, Real-Time, Scheduling**, Synchronization, C, Assembly.
- June 2007 **IT Intern**, *Allibert-Trekking*, Montmélian.
upto August 2007
- User and server support on a Mac OS X infrastructure.
 - Deployment of **monitoring tools**.
 - Development of synchronization tools between inventory, administration and monitoring tools.
 - Environment: Mac OS X, Php, Perl, Python, Bash, MySQL, openDirectory.
- January 2007 **Junior-Entreprise Consultant**, *MVA Limited*, Grenoble.
- Development of a GPS coordinate extraction tools using Google Maps.
 - Environment: **Java**, Swing.
- Octobre 2006 **Junior-Entreprise Consultant**, *Institut Laue-Langevin*, Grenoble.
- Porting of an objective-C crystallography demonstration application to Java.
 - Environment: Java, Swing, HTML.
- August 2003 **Intern**, *Xyalis*, Grenoble.
- Development of **non-regression tools** for Xyalis complete software suite.
 - Environment: Bash, Tcl, Tk.

Education

- 2008 **Computing Science Engineer**, *ENSIMAG*, Grenoble.
2008 **MSc in Embedded systems**, *Northumbria University*, Newcastle, UK.
- In parallel of the third year at ENSIMAG..

Personal Experience

- 2008 **Contributions to Open Source projects.**
upto Today - Contribution to mailing list and development of **Linux**, **Git**, OpenSM, ODP.
- Occasional involvement in various projects: Sick-Beard, RBTools, libdbi...
- 2011 **Damage (DAtabase MetA GEnerator).**
upto Today - Development of a script toolset for custom database generation.
- Generates a complete access and modification API for C, Java, Ruby to XML/YAML/Binary databases from a simple YAML description.
- Environnement: Ruby, GPL.
- 2006 **Participation to IBM Cell B.E. Contest.**
- Development of a generic Open Source *producer/consumer* framework for Cell clusters.
- Environment: C++, sockets.
- 2005 **IT Administrator of N'Sigma, ENSIMAG Junior-Entreprise.**
upto 2007 - Administration of a mixed Linux/Windows network.
- Participation to cost assessments of N'Sigma contracts.

Skills

Languages	C, Ruby , Java, Assembleur, Ada, Php, C++	Graphical Environment	X11, Gtk, Tk, Swing, Qt
Tools	Emacs, Netbeans, Eclipse, gcc, gdb	Video	H.265 , x265
Operating Systems	Kernel, Parallel programming, Drivers , Signals	Version control	Git, Gitolite, Hudson , CVS, SVN, SCCS
System Administration	Linux , FreeBSD, Samba, Postfix, Apache, Shell scripting (Bash, Sed, Awk)	Networking	Routage, Firewall, TCP/IP, Ethernet, Sockets, QoS, Infiniband, ODP
Databases	SQL, Oracle, MySQL, LDAP, Design , Optimisation	Mathematic Tools	Matlab, CoinOR, GPLK
Languages			
French	Native speaker		
English	Bilingual		<i>TOEFL Score:100/120</i>

Patents

- WO2011001362 Methods and devices for evaluating interconnection efficiency of parallel computer networks based upon static routing schemes
- WO2011151569 Method of pseudo-dynamic routing in a cluster comprising static communication links and computer program implementing this method
- WO2011144848 Method of optimizing routing in a cluster comprising static communication links and computer program implementing this method

Others

- Hobbies Mountains, photography, traveling, guitar.
Sport Mountaineering, rock climbing, hiking, ski and ski touring.