# Nicolas Noble

## Software Engineer

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**EXPERIENCE**

### Software Engineer — 2008-Present
Blizzard Entertainment, Irvine, CA
- ▷ Worked on the world's leading MMORPG, World of Warcraft.
- ▷ Added numerous features: IPv6, 64 bits support, sampling profiler, asset encryption.
- ▷ Deep rework of the servers' database layer, supporting safe hotfixing.
- ▷ Created a database sharding service, to store global player data.
- ▷ Modernized various low-level parts of the code, notably its Linux network layer.
- ▷ Made several improvements of the protocol layer, with more code generation.
- ▷ Designed inter-datacenter communication architecture, including encryption.
- ▷ Debugged countless hard-to-find issues, especially Linux-specific ones.

### Systems Engineer — 2006-2008
Blizzard Entertainment, Vélizy, France
- ▷ Worked on a large environment comprised over multiple datacenters.
- ▷ Made numerous improvements in the deployment of custom software.
- ▷ Improved services by debugging and profiling provided applications.
- ▷ Worked closely with the dev teams to provide feedback and performance advices.
- ▷ Re-implemented some critical portions of code that were underperforming.

### Research Engineer — 2004-2006
Université de Metz, Metz, France
- ▷ PhD student of Human Computer Interaction.
- ▷ Worked on a European project aimed at creating educational interfaces for visually impaired children: *http://micole.cs.uta.fi/about.1.html*
- ▷ Published research papers on the topic of tactile feedback.

### Systems Engineer — 2002-2003
Europe Online Investments SA, Luxembourg
- ▷ First professional experience in an IT environment, part time during studies.
- ▷ Managed servers in a datacenter, mainly running Linux and Solaris.
- ▷ Hosted untrusted third-party software using chroot environments on live servers.
- ▷ Developed C++ glue software running on the servers as helpers.
- ▷ Thwarted multiple network intrusions.

### Open Source Project Maintenance
- ▷ uC-sdk - *https://gitorious.org/uc-sdk*
  Small SDK for embedded platforms, mainly running on ARM Cortex-M CPUs.
- ▷ Balau - *http://cgit.grumpycoder.net/cgi/cgit/Balau/*
  C++ Framework designed around a Reactor event manager with coroutines.

**EDUCATION**

***Highest degree achieved:*** Equivalent of Master's Degree in Computer Science.
(*French DEA - Diplôme d'Études Appliquées*)
Obtained in 2003 at Université de Metz - *http://www.univ-metz.fr/*
Concentration: network and protocols.

### Publications during PhD studies:
- ▷ Informal poster about force feedback devices presented during IHM2005, Toulouse. (in French; original title: "Etude préliminaire sur différents retours tactiles à discrimination rapide")
- ▷ Short paper "Preliminary study of tactile feedback devices featuring quick discrimination" published in proceedings of Enactive 2005, Genova.
- ▷ Short paper "Shape discovering using tactile guidance" published in proceedings of Eurohaptics 2006, Paris.

**SKILLS**

*Known programming languages:*
▷ Day to day usage: C++ (C++11), C, Lua, Assembler, Bash.
▷ Some notions: Python, Javascript, PHP, LaTeX.
▷ Basic or pre-existing knowledge of: C#, Java, Pascal, ADA, Basic, Perl, CAML.

*Known CPU architectures:* i686, x64, ARM, MIPS.

*Known tools:* Visual Studio, gcc, clang, gdb, git, svn, cvs, lex, yacc, scons, make, IDA.

*Known operating systems:*
▷ Deep knowledge of Linux's architecture, internals and programming.
▷ Programming daily on Windows environments.
▷ Casual programming under Darwin (MacOS).

*Miscellaneous skills:*
▷ Very strong multithreading knowledge.
▷ Very strong networking knowledge.
▷ Strong reverse engineering knowledge.
▷ Strong sense of performance problems.
▷ Strong sense of software security and cryptography.
▷ Strong sense of portability problems.

**MISCELLANEOUS**

Formely participated in an unofficial PlayStation2 SDK (known as *ps2sdk*).

Provided unofficial French translations of some video games:
▷ Parasite Eve - *http://traf.romhack.org/index.php?p=patchs&pid=594*
▷ Mega Man X4 - *http://traf.romhack.org/index.php?p=patchs&pid=597*

Gave Computer Science lectures to undergraduate students and elementary school children:
▷ IUT de Metz - *https://www.iut-metz.univ-lorraine.fr/*
▷ École primaire Gaston Hoffman - *http://ecolegastonhoffmann.wordpress.com/*

Electronics hobbyist.

Video games enthusiast.

Lawful Permanent Resident of the United States.

Best quote used by the marketing department to describe our team at Europe Online:
*"These guys, we have no idea what they're doing or why they're here, but we know if they're not at their desks, servers ain't working anymore."*