

Rémi Denis-Courmont

Senior software engineer, *Centralien* (MSc)
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Linux/Unix system, networking, security & multimedia software development expert

Professional experience

Principal Engineer, Mobile Security November 2016 - ...
Huawei Technologies Finland: 2012 laboratories Helsinki, Finland
Linux kernel hardening on ARMv8-A, HiSilicon system-on-chip

Senior System Software Engineer December 2014 - October 2016
NVIDIA, mobile software Helsinki, Finland
Tegra system-on-chip device drivers for video and image inputs.
Linux/Android kernel and real-time coprocessor driver implementation.
Software validation with hardware simulator and on prototype hardware.

Senior System Software Engineer October 2012 - November 2014
Icera Inc. (NVIDIA) Helsinki, Finland
Embedded software development for 4G/LTE protocols stack.
Icera cellular modem firmware components for mobile devices.

Senior Software Engineer October 2011 - August 2012
Nokia Mobile Phones Espoo, Finland
Low-cost mobile phone platform project based on Linux and Qt.
Linux device drivers for a cellular modem and GPRS-based IP networking.
Error management in cooperation with a system-on-chip vendor.

Software Engineer January 2007 - September 2011
Nokia Devices / Nokia Technology Platforms Helsinki, Finland
Maemo / MeeGo mobile platform project based on Linux and Qt.
Nokia N900, N9 products development.
Linux kernel "Phonet" protocol stack and USB, GPRS drivers development.
FCC and mobile operator certification support (incl. 3 months in US).
Standardization, implementation of IETF NAT traversal (STUNbis, TURN).

Assistant Research Engineer (master thesis worker) May 2006 - November 2006
Nokia Research Center Helsinki, Finland
Master thesis on VoIP servers scalability.
Development of a VoIP Application Layer Gateway for open-source Sofia SIP.

Summer Trainee June 2005 - August 2005
Nokia Research Center Helsinki, Finland
Implementation of draft IETF protocols on Linux.

Worker Intern June 2004 - July 2004
Faurecia Industries Hénin-Beaumont, France
Soldering and assembly of car components on a factory production line.

Education

Graduate engineering student September 2003 - December 2006
École Centrale de Paris Châtenay-Malabry, France
MSc, French diploma engineer.
IT and telecommunications as major, general engineering.

Autonomous study: stand-alone high-performance implementation of Teredo protocol for Linux.

Preparatory class student (under-graduate) September 2001 - July 2003
Lycée Faidherbe, Classes Préparatoires, Mathématiques-Physique Lille, France
Mathematics, Physics as majors, Computer Science as minor.
2 years highly intensive training competitive entrance exams
to the French *Grandes Écoles*.

Volunteer experience

Lead Developer November 2003 - present
VideoLAN project
Linux support: Audio/Video outputs/capture, digital TV reception, screen grabbing, device hot-plug.
Assembler optimizations for the ARM architecture, Cortex-A8 processor.
Network streaming protocols, encryption and authentication: TLS/SSL, SRTP.
Portability layer including Unicode, threading, file system.
Build system.
MIDI support.
Security contact and error manager (2007 - 2011).

Linux System Administrator October 2003 - May 2005
VIA Centrale Réseaux Châtenay-Malabry, France
Linux servers and IP network maintenance for the ECP student dormitories.

Skills & Expertise

Languages	C (ANSI, 99, 11), C++, assembler (ARMv7, ARMv8)
Environments	POSIX, Linux, kernel, embedded, multi-thread, Qt, Win32
Networking	TCP/IP, IPv6, IETF protocols, VoLTE/LTE
Methodology	Scrum, Trac, agile development, team work

Languages

English	Full professional proficiency (working language since 2006)
French	Native mother tongue
German	Elementary proficiency
Finnish	Elementary proficiency
Swedish	Elementary proficiency

Publications and patents

Test Vectors for Session Traversal Utilities for NAT (STUN)

RFC5769, Internet Engineering Task Force April 1, 2010

Network Address Translation Behavioral Requirements for DCCP

RFC5597, Internet Engineering Task Force September 1, 2009

Method, Apparatus and Software for Packet Modification

United States Patent WO/2009/059851, issued May 14, 2009

Timer handling

United States Patent Application 20090207738, pending

Honors and awards

VLC Developers Most Commits award 2009

École Polytechnique admissibility 2003

École Normale Supérieure (*Ulm*) admissibility and ranking 2003