

Stelian Pop

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Consultant - Project leader - Security team leader Industrial computing, real-time, embedded

Linux kernel developer since 1998

Participation in many Open Source projects

Expertise:

- Linux systems and real-time and/or embedded variants
- UNIX environment
- Low level software (kernel, device drivers)
- Free and Open Source Software

Significant projects:

- Project leader and contributor to a project creating several embedded devices running Linux and featuring touchscreen interfaces, contactless communication (NFC/Zigbee) and security mechanisms (smartcard, ISO7816, crypto processor) (2009-2011).
- Participation in Linux kernel development: maintainer of several device drivers and kernel APIs, many contributions all over the kernel subsystems (since 1998).
- Delivery of many training sessions about Linux kernel development, real-time development using Xenomai, RTAI or RTLinux, and system programming under Linux (since 2003).
- Project leader and contributor to a project implementing a full cross-compilation toolchain (binutils, gcc, gdb, eclipse) for a 8/16/32 bits custom micro-controller (2008-2009).
- Project leader and contributor to a project dealing with porting the U-Boot loader and the Linux kernel for the Atmel's AT91CAP9 SOC and its development kit, AT91CAP9ADK (2007-2008).
- Project leader and contributor to a project dealing with migration of avionic simulators from a proprietary UNIX towards Linux/x86_64 (using the PREEMPT_RT extension) (2007).
- Project leader and contributor to a project dealing with porting the Linux kernel and several device drivers, optimizing the crumple chain and building an embedded Linux distribution for a video encoding card based on an ARM 1136 processor (2005-2007).
- Project leader and contributor to the development of a post-mortem analysis chain for Linux (capture of the system state, state transmission to a crash server and analysis tools) for an embedded radio communication card based on a PowerPC PQ3 processor (2006).
- Project leader and contributor to a project dealing with the industrialisation (simplification and automation of build procedures) of an embedded Linux distribution based on the Montavista Linux PNE distribution (2006).
- Project leader and contributor to a project dealing with porting the Linux kernel and several device drivers (mainly WiFi, Bluetooth, GPRS), optimizing the cross-compile chain and building an embedded Linux distribution for a multimedia broadcast device based on an Atmel AT91 processor (2006).
- Project leader and contributor to a project dealing with implementing the power saving support in the Linux kernel for a board based on a PowerPC MPC5200 processor (2006).

- Many expert consulting engagements on the Linux kernel or Linux system software projects.
- Development of many Linux device drivers (webcam, multi-channel ISDN, USB, Apple and Sony laptops specific features).
- In charge of the technical support department (Alcôve - 2004-2005).
- Development of a geographical client-server system in Java (using GIS servers, data bases and statistical calculation servers) used for geomarketing studies (2000-2003).

Talks, articles:

- February 2006: talk at **Linux Solutions Paris** on the real-time solutions for Linux
- February 2005: talk at **Linux Solutions Paris** on the Linux kernel development model
- April 2004: talk at **Libr'east of Paris** on the new 2.6 Linux kernel features
- February 2004: talk at **Linux Solutions Paris** on the new 2.6 Linux kernel features
- December 2003: article on debugging the Linux Kernel for the **GNU/Linux Magazine France**
- February 2003: talk at **Linux Solutions Paris** on debugging the Linux kernel
- June 2002: article on the distributed file systems for **Tribunix**
- January 2002: talk at **Linux Expo Paris** on the development of Linux device drivers

Experience:

- **TazTag, security team leader / embedded Linux expert**
(since 2009)
- **Lead Tech Design, project leader / Linux kernel and Xenomai real-time expert**
(2007-2009)
- **Open Wide, consultant / Linux kernel and Xenomai real-time expert**
(2005-2007)
- **Alcôve, consultant in free software / trainer / low-level Linux expert**
(2000-2005)
- **Captimark/EDS, software engineer**
(1997-2000)

Education:

Master of Science, Department of Computer Science
University of Paris - Denis Diderot, graduated **Head of Class** in 1997

Technical expertise:

- languages: C, C++, Python, Java, Shell, assembly (X86, PowerPC, ARM)
- systems: GNU/Linux (standard and embedded distributions), UNIX (HP-UX)
- deep expert knowledge in many areas: network, storage, source control, encryption