

## Pierre Pronchery

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French citizen, born in 1982

## SKILLS

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### Security consulting:

#### *Source code audits:*

- Best-effort and complete reviews of industrial-grade software projects
- Discovery of implementation flaws (C/C++, PHP, Java...)

#### *Reverse-engineering:*

- Analysis of firmware images for consumer electronics (own developments, some experience with IDA Pro)
- Hardware-level attacks (serial, JTAG...)
- Analysis and fuzzing of proprietary protocols

#### *Penetration tests:*

- Discovery and exploitation of computer networks and services (nmap...)
- Native and web-based applicative Blackbox tests, multi-architecture projects

#### *System hardening:*

- Implementation and verification of Best Practices on UNIX and Windows platforms

### Programming:

#### *Systems software:*

- Kernel programming in C, Assembly (BSD, Linux...)
- Kernel- and user-land contributions to the [NetBSD](#) Operating System
- Research & Development in automated discovery of flaws in software

#### *Distributed software:*

- Implementation and extension of RPC components (TCP/IP, SSL, PVM...)
- Security tools (SSL Man-in-the-Middle, packet injection...)

#### *Graphical interfaces:*

- Development of a lightweight Desktop and Smartphone environment (C, Gtk+)
- Experiments with alternatives to the X11 windowing system (Xynth, OpenGL)

#### *Web applications:*

- Development of websites, in either personal or professional context
- Implementation of a complete Content Management System (CMS) with PHP

### Systems

#### administration:

- GNU/Linux, BSD and other UNIX environments
- Deployment of services (DNS, SMTP, LDAP...)
- Task automation (Perl, shell scripting...)
- Monitoring solutions (performance, security)

## WORK EXPERIENCE

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- Since Sep 2007: *DUEKIN Consulting* as **Freelance Security Consultant**
- Source code, Blackbox and network audits
  - Embedded systems development
  - Research in applicative flaws and reverse-engineering
- Feb 2010 - May 2011: **Co-founder, Security Consultant** at *loopb-ack IT-Security Consulting GbR*
- Security reviews and trainings
  - Exposure assessment
- Jul 2008 - Oct 2009: *Bearstech SCOP*, supporting the **R&D team**
- Promoting the concept of Hackable Devices (Open Source hardware)
  - Co-founder and maintainer of the [hackable:1](#) Linux distribution
- Feb 2006 - May 2007: *n.runs AG* as **Security Consultant**
- Source code audits (C/C++, embedded...)
  - Blackbox penetration-tests (embedded devices)
  - Network penetration-tests
- Jan 2005 - Oct 2005: *Fpconcept SARL* as **Web Developer** (PHP/MySQL, scholar internship)
- Design and implementation of a groupware solution
  - Deployment of websites, including an online shop
- Nov 2004 - Dec 2004: *Netanswer* as **Web Developer** (PHP/MySQL, scholar internship)
- Development and support
- May 2004 - Oct 2004: *COVENTYA* as **Systems Administrator** (scholar internship)
- Monitoring of servers and network equipments (Squid, Cacti, Nagios)
  - Administration of the software infrastructure (Active Directory, Lotus Domino)
  - Maintenance of user workstations, helpdesk
- Apr 2002 - Sep 2002: *INRIA Rhône-Alpes* as **Software Developer**
- Graphical interface in C++ and Gtk+ for the "Opale" project

## EDUCATION

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- Sep 2003 - Oct 2005: *INSIA* part-time computer engineering school, Paris (France)  
**Computer Science Engineer** (systems, networks, programming, security)
- Sep 2002 - July 2003: *Brookes University*, Oxford (United Kingdom)  
**BSc in Computing** with Honors (system software, networks, Object-Oriented Programming, distributed systems, compiler construction)
- Sep 2000 - June 2002: *IUT2 Pierre Mendès-France University*, Grenoble (France)  
**DUT Génie Logiciel** (2 years Computer Science degree)
- Languages: Native French speaker, fluent English, conversational German

## **PERSONAL INVOLVEMENT**

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Presenting at conferences:

*Talks:*

- FOSDEM 2014, « *The DeforaOS Desktop* »
- FOSDEM 2014, « *The EdgeBSD Project* »
- FrOSCon 2013, « *The EdgeBSD Project* »
- BSDCan 2013, « *Call your NetBSD* » (NetBSD on smartphone hardware)
- pkgsrcCon 2013, « *DeforaOS and pkgsrc* »
- EHSM 2012, « *Touch your NetBSD* » (NetBSD on tablet hardware)
- NetBSDfr hackathon 2012, « *Touche ton NetBSD* » (in French)
- EuroBSDcon 2012, « *Touch your NetBSD* »
- FOSDEM 2012, « *Touch your NetBSD* » (early version)
- Osec 2011, « *The DeforaOS (de-)assembly framework* » (reverse-engineering)
- Pas Sage en Seine 2011, « *Disassembling Android applications* »
- Osec 2010, « *Confidence in SMS* » (Mobile security)
- Pas Sage en Seine 2010, « *Confidences par SMS* » (in French)
- CELF 2009, launching [hackable-devices.com](http://hackable-devices.com)
- GSMA 2009, talk about hackable devices (Open Source Hardware)
- 23C3 2006, « *Fudging with firmware* » (firmware reverse-engineering)
- Osec 2006, « *Fudging with firmware* »
- Osec 2005, « *Packet tapping* » (libpcap shortcomings)
- RMLL 2005, « *Paranoia hour* » during Les Nocturnes

*Workshops:*

- RMLL 2009, embedded development workshop
- FOSDEM 2009, embedded development workshop
- HAR 2009, embedded development workshop
- 25C3 2008, lightning talk and embedded development workshop

Contributions to the **NetBSD** Operating System:

- Official developer since May 2012
- Set of drivers for the Nokia N900 smartphone
- Author of the uts(4) driver (USB touchscreens), fixes to the calibration framework
- Port of the aps(4) driver from OpenBSD
- Security advisory and patch for a local DoS (CVE-2010-0561)
- Fixes and backports to every major release since NetBSD 4.0
- Maintainer of over 20 packages in pkgsrc and pkgsrc-wip

Development of an experimental Operating System, **DeforaOS**:

- Remote and secure access to users' data
- POSIX compatibility layer
- Desktop environment
- Support for embedded platforms