

Curriculum vitae

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Latest version: <http://www.stefansperling.de/stefan-sperling-cv.pdf>

Professional Focus

- Open Source developer and consultant
- Software development process consulting and tool support
- Workshops and trainings for developers and end users

Projects

- Osmocom developer (2018 to present, ssperling@sysmocom.de, www.osmocom.org / www.sysmocom.de)
 - Development of fixes for various software bugs filed in Osmocom's issue tracker
 - Development of automated GSM protocol tests with Eclipse Titan TTCN-3
 - Implemented feature which prevents overload if too many phones attempt to connect concurrently upon GSM base station start-up
 - Review of code contributions to Osmocom
- OpenBSD support (2015 to present)
 - Hands-on workshops for OpenBSD firewall administrators with original written training materials
 - Diagnosis of IPsec VPN stability issues
 - Implementation and maintenance of a high-availability firewall setup spanning two office locations in Berlin, based on OpenBSD with pf, carp, and IPsec
 - Support of design, implementation, and maintenance of a dozen+ firewall setup spanning two data centres in Luxembourg, based on OpenBSD with pf, carp, and IPsec
- OpenBSD developer (2008 to present, stsp@openbsd.org, www.openbsd.org)
 - Improved 'ospf6d' implementation of OSPF3 IPv6 routing protocol
 - Added UTF-8 support and POSIX locale enhancements
 - General network stack improvements, especially in IPv6 and wireless
 - Added and improved drivers for touchpads, card readers, ethernet and wifi devices
 - Improved software RAID boot support
 - Added 802.11n support to wireless subsystem and wireless drivers
 - Implemented 802.11n-capable transmit rate control algorithm
 - Fixed interoperability problems with 802.11k/v/r access points
 - Added support for roaming between access points to drivers for Intel wifi devices
 - Switched Atheros USB wifi device driver to an open source firmware implementation
 - Patched 2017's WPA2 vulnerability "KRACK" in OpenBSD

- General maintenance of OpenBSD’s 802.11 wireless stack and review of related contributions
- Porting of third party applications, including Apache Subversion
- Participation in and organization of developer meetings
- Recurring speaker at the yearly EuroBSDcon conference
- Apache Subversion developer (2007 to present, stsp@apache.org / stsp@elego.de)
 - Co-designed and co-implemented tree conflict detection for Subversion
 - Improved Subversion’s authentication credentials cache
 - Continuous review and audit of Subversion code base
 - Implemented parts of Subversion’s next-generation working copy library
 - Designed and implemented parts of Subversion’s move-tracking support
 - Added ‘svn patch’ command for applying unidiff patch files
 - Improved Subversion’s merge conflict resolver
 - Managed Subversion releases
 - Served as Google Summer of Code mentor several times
 - Reviewed and committed contributed patches, fixed user-reported issues
 - Participation in and organization of developer meetings
 - Serving as Apache Subversion Project Management Committee Chair (2017 to present)
 - Member of the Apache Software Foundation
- Consulting services around Apache Subversion (2008 to present, with www.elego.de)
 - In-depth workshops and trainings for Subversion users and administrators
 - Advice on advanced branching/merging strategies
 - Migration to Apache Subversion from other version control systems
 - Provided assistance during version upgrades of Apache Subversion deployments
 - Hands- on troubleshooting support for users and administrators
 - On-site diagnosis and fix of client- and server-side bugs
 - Repaired several instances of severe repository corruption
 - Communication of customer requirements to Subversion’s developer community
- Community Wireless Networks (2005 to present)
 - Setup and maintenance of nodes in Berlin’s community wifi mesh network “Freifunk”
 - Deployment and maintenance of long-range (2km) roof-top directed wifi links
 - Porting of OLSR routing daemon to OpenBSD

Employment

- 2004 – 2014 Developer and consultant at elego Software Solutions GmbH, Berlin, Germany
- Self-employed since 2015

Education

- 2008 – 2009 MSc Software Development for Computer Networks, University College Cork (UCC), Ireland
- 2004 – 2008 BSc Computer Science, Free University of Berlin, Germany
- 2003 – 2004 Computer Science, Technical University of Berlin, Germany
- 2000 – 2003 German Abitur, Anna Freud Oberschule, Berlin, Germany
- 1999 – 2000 Leaving Certificate, Ashton School, Cork, Ireland

Skills

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|-------------------|---|
| Formal Languages | C, C++, Java, Python, Perl, bourne shell, m4 (autoconf), make, SQL, Forth, TTCN3, L ^A T _E X |
| Natural Languages | German (native), English (near native), French (intermediate) |
| Version Control | Apache Subversion, Git, Mercurial, Fossil, CVS |
| Operating systems | Linux (any variant), BSD (any variant) |
| Web | HTTP, HTML, CSS, JavaScript, PHP, WebDAV, XML |
| Networking | DHCP, DNS, OSPF, OLSR, BGP, IPv4, IPv6, pf, iptables, IPsec, OpenVPN, 802.11, OpenWRT, GSM, Osmocom |
| Databases | PostgreSQL, SQLite |