

Sebastian Pipping

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Education

- 10.2003 – present Study of Computer Science, Technical University of Berlin
Finished my Intermediate diploma.
Currently going for a "Diplom" degree.
- 04.1999 – 06.2003 High school diploma / Abitur, Kant Gymnasium Berlin
Another change of schools as this school had a better reputation.
I worked on the official homepage of that school.
- 08.1998 – 04.1999 High school, Lilienthal-Oberschule Berlin
- 08.1993 – 07.1998 High school, Bertha-von-Suttner-Oberschule Berlin
Joined at the fifth form two years early
because of good grades and
to be able to learn Latin as first foreign language.
I attended a course for programming in LOGO.
- 10.1990 – 07.1993 Primary school, 9. Oberschule "Dr. Philipp Schaeffer"
- 09.1989 – 10.1990 Primary school, Friedrich-Wolf-Oberschule

Professional Activities

- 05.2009 – 08.2009 **Google Summer of Code 2009 for Gentoo, Developer**
Concept and realization of a system to collect information on Gentoo machine configurations including details about installed packages, activated code repositories, architecture, compile flags, mirror configuration. [5]
- Successfully passed final evaluation
 - Technologies: Git, Python, SQL Alchemy, TurboGears, Trac, Redmine
 - Design of a database model with about 35 tables
 - Extending Smolt code at the areas ..
 - Client: Configurable collection of Gentoo-specific data
 - Server: Handling data, introduction of batch processing
 - Report generation
 - Realization of strong transparency and control on privacy
 - Collaboration with the Gentoo community and Smolt upstream including patches
- 08.2007 – 02.2009 **Qt Software Berlin, Developer**
- Nightly build system in C++ for Qt Creator producing installer-based daily snapshots involving VMWare Player, Ubuntu 5.04 and later, Windows, Git, Bitrock Install Builder
 - Extension of Doxygen by Qt Help files output [1], communication with upstream
 - doxygen2qthelp [2], a tool to make Qt Help files from Microsoft HTML Help projects
 - QtBoostRegex [3], Qt wrapper for Boost.Regex
 - 3 company-official blog posts on Qt Labs
 - Fixing GCC 3.3.5 compile errors
 - Other miscellaneous tasks
- 02.2008 – 04.2008 **Institute for Theoretical Biology Humboldt-Universitaet zu Berlin, Developer**
Conversion of a larger Makefile-based software project “Relacs” [4] with about 20 plugins to GNU Autotools:
- Extension for Qt’s Meta object compiler (moc3) at Makefile level
 - Static link workarounds to detect plugin link errors at build time
 - Debian package creation
 - Large-scale source re-organization on file, include and Makefile level

- [1] <http://labs.trolltech.com/blogs/2009/01/15/creating-qch-files-from-doxygen-...>
- [2] <http://labs.trolltech.com/2008/06/20/introducing-doxygen2qthelp-...>
- [3] <http://labs.trolltech.com/blogs/2009/01/30/qt-boostregex-qtboostregex/>
- [4] <http://www.relacs.net/>
- [5] <http://socghop.appspot.com/org/home/google/gsoc2009/gentoo>

Projects

- 04.2007 – present Kate of KDE
<http://www.kate-editor.org/>
I have been working on multi-line search and replace functionality (backend) and the related search bar (frontend) for the Kate Advanced Text Editor of KDE. Both regular expression and plaintext searches were limited to single-line patterns in KDE-3 releases. In contrast to the old search dialog the new bar does not stand in the way when you want to look at your search results. My username on KDE is "sping".
- 01.2007 – present uriparser
<http://uriparser.sourceforge.net/>
uriparser is my cross-platform RFC 3986 URI parser library written in ANSIC. Song Weijia initially started this library but I found serious problems in its old Bison-based implementation when I came across it. The fact that I needed URI parsing for XSPF validation in libSpiff myself and that implementations conforming to that RFC are very rare made me join the uriparser project and end up re-writing all code as a hand-written parser for release 0.3.0. The technique I used is called LL(1) parsing which I learned at university. Its major advantage is that it doesn't require any lookahead and thus is very fast. uriparser currently has ports for 24 operating system distributions including Gentoo and FreeBSD.
- 08.2006 – present libSpiff
<http://libspiff.sourceforge.net/>
libSpiff is my cross-platform C++ reference implementation of XSPF, the XML Shareable Playlist Format. During its implementation I had a deeper look into XML (namespace nesting and whitespace handling) and also extended the official XSPF testsuite with new testcases along the way. libSpiff is used by Herrie, a console-based music player. libSpiff currently has ports for 18 operating system distributions including Gentoo and FreeBSD.
- 10.2005 – 07.2007 Plainamp
<http://plainamp.sourceforge.net/>
Plainamp is my Open Source Winamp Core written in C++. Winamp has tons of outstanding plugins but the core is not Open Source. Plainamp can load all five kinds of Winamp plugins. At some point I needed a metadata-enabled playlist format to store the full playlist state, came across XSPF and paused Plainamp development to create the missing XSPF library. An unreleased rewrite of Plainamp uses my own ultra-lightweight OOP window framework "OOWindows".

The full list of projects I have been working on is online at
<http://www.hartwork.org/doku.php?id=projects>.

The list of SourceForge projects that I'm involved with can be viewed at <http://sourceforge.net/users/hartwork/>.

Languages

German Oral: Native Written: Excellent
 English Oral: Good Written: Good

Latin with qualification ("Großes Latinum")

Keywords, additional info

Experience

Cross-platform focus My code works on Windows and Unix

Plugin systems Winamp, Foobar2000, EmEditor. Experience with both plugin and host side.

APIs Expat, Windows API including Hooks, Qt including Jambi

Fields Open Source, parsing, XML, library design, text editor internals, audio, RFCs/specifications, GNU build system

Teamwork from distributed with different time zones to three people team-coding in the same site

Programming languages

Primary

C++ 6 years of application, my favorite language overall

C 6 years of application

Python Smolt client/server extensions, Online XSPF validator

Java Several projects at university, working with Eclipse

Bash Test suite execution, build helper scripts

LaTeX For any work in university including presentations

Secondary

Matlab/Octave Application in several courses at university

PHP Several smaller websites, MySQL access

Perl Text processing, download counter with MySQL backend

Opal Functional programming basics learned at university

Pascal Nokia-Snake console clone

Version control systems

Git, Subversion, CVS, Perforce

Other skills

Regular expressions Daily application of advanced patterns

Design patterns Interest in and knowledge of common patterns

Preprocessor hacks Advanced usage of the C/C++ preprocessor

SQL Basics and a bit more

Installer creation with NSIS and Bitrock InstallBuilder

Packaging for Debian and Gentoo

Communicating in a direct but friendly way

Usability Familiarity with both concepts and methods

Issue tracking Regular use of Bugzilla, Trac and others

Licensing Familiarity with licenses and concepts of Creative Commons and Free Open Source Software

Spare time

In my spare time I enjoy Shiatsu massages and swimming regularly, going to hardrock concerts and the movies occasionally. I actively participate in several Free Open Source Software projects and will continue doing so in the future.

References

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