Serge Ziryukin

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✍ *github.com/ftrvxmtrx*

Education

2003–2008 **B.S.**, *Belarusian State University of Informatics and Radioelectronics*, Minsk, *Computers, Systems and Networks*.

BS thesis

title *Microkernel operating system based on L4 specification.*

supervisors Glecevich I.I.

description Two main types of kernels (monolithic and μ) are described and compared, showing μ-kernel drawbacks and benefits. L4-based μ-kernel implementation for x86 and MIPS is provided, its loading/execution process and APIs are described.

Most used development tools

Languages C, OCaml, Shell, Python, C++, Lua

Op. systems Arch Linux, FreeBSD, Mac OS X

Documentation Doxygen, ocamldoc, LaTeX

Build systems CMake, GNU Make, qmake

SCM Git, Mercurial, SVN

IDE Emacs, XCode

WM xmonad

Languages

English **Intermediate**

Experience

Vocational

2010– **Software Engineer**, *Synesis*, Minsk.
HAL for NEC devboard.

- In-kernel RTP/RTCP support implementation;
- Tests in Python.

2010   **Software Engineer**, *Synesis*, Minsk.
Porting DVB-T software to NEC devboard.

- Porting U-Boot to the devboard;
- Porting Linux to the devboard;
- MIPS binaries reverse-engineering;
- Porting DVB-T software and platform-specific bugfixing;
- Minimizing and putting the whole firmware into 8Mb flash device;
- CMake build system.

2008–2010   **Software Engineer**, *Synesis*, Minsk.
iPhone game development.

- Porting existing games to the iPhone platform.

2008   **Software Engineer**, *Synesis*, Minsk.
OpenGLES-based UI tech demo for Freescale i.MX31 PDK.

- The tech demo.

2008   **Software Engineer**, *Synesis*, Minsk.
Porting previous project to Fujitsu board.

- Cross-compiler toolchain;
- Providing a way to run and test the software;
- Adding Fujitsu board (with proprietary RTOS running on it) support to middleware.

2008   **Software Engineer**, *Synesis*, Minsk.
DVB-T set-top box cross-platform software for three different boards.

- Cross-platform middleware API design and implementation;
- TI-DM64446 (with Linux running on it) specific middleware implementation;
- Build system.

2007–2008   **Software Engineer**, *Synesis*, Minsk.
DVB-S Linux-based set-top box (ST7109) software.

- Tests in Python;
- Extending automatic testing framework;
- Bug fixing;
- Screens;
- Automatic software update functionality and tools.

Miscellaneous

2010–   **Sole developer**.
Single cross-platform Quake I/II/III game engine.
`https://github.com/ftrvxmtrx/metaquake`

- Cross-platform;
- Nice modular architecture;
- Clean and well-documented internal API;
- Simplification through the code generation;
- A lot of tests.

2010–   **Sole developer**.
QuakeC bytecode to native code library compiler.
`https://github.com/ftrvxmtrx/qc2lib`

- OCaml;
- Well-documented code;
- LLVM usage in the future.

2010   **Sole developer**.
Tool for finding unnecessary include directives.
`https://github.com/ftrvxmtrx/inclean`

2010   **Sole developer with few contributions from others**.
2D puzzle for Maemo-based Nokia N900.
`http://maemo.org/downloads/product/Maemo5/colorflood`

- Qt, C++;
- CMake build system.

2009   **Sole developer with few contributions from others**.
Flac/Ape/Wavepack + cue sheet into tracks splitter.
`http://split2flac.googlecode.com`

- One small (652 LOC) POSIX-compiant shell script to do everything.

2009   **Sole developer**.
Open-source 2D game engine.
`https://github.com/ftrvxmtrx/erszebet`

- Lua for game code;
- Chipmunk for physics;
- Linux, FreeBSD, Mac OS X and iPhone support.

2005–2006   **Sole developer**.
Client-side QuakeC implementation for Darkplaces game engine.

- Heavily used by Nexuiz.

2005–2006 **Sole developer**.
TomazQuake derived game engine.

- ○ Custom Quake-based network protocol to lower the traffic;
- ○ Rendering optimizations for high framerates.

2004–2005 **Sole developer, mapper, modeller**.
Quake UT-like game mod.

Interests

Programming `http://github.com/ftrvxmtrx`
`http://ohloh.net/accounts/ftrvxmtrx`

Problem solving `http://projecteuler.net/profile/ftrvxmtrx.png`
`http://spoj.pl/users/ftrvxmtrx`

Photography `http://picasaweb.google.com/ftrvxmtrx`

Music `http://last.fm/user/i515i`

Games Quake I/II/III, UT99, Scrabble, Warcraft II, etc