

Serge Ziryukin

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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 Gleceвич 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.
OpenGL-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-DM6446 (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/Wavpack + cue sheet into tracks splitter.
<http://split2flac.googlecode.com>
- One small (652 LOC) POSIX-compliant 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