

# Serge Ziryukin

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[github.com/ftvrxmtrx](https://github.com/ftvrxmtrx)

## 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  $\mu$ ) are described and compared, showing  $\mu$ -kernel drawbacks and benefits. L4-based  $\mu$ -kernel implementation for x86 and MIPS is provided, its loading/execution process and APIs are described.

## Most used development tools

Languages C, OCaml, Erlang, C++, Shell  
Op. systems Arch Linux, Mac OS X, FreeBSD  
Documentation Doxygen, ocamlldoc,  $\LaTeX$   
Build systems CMake, GNU Make, qmake  
SCM Git, Mercurial, SVN  
IDE Emacs, XCode  
WM xmonad

## Languages

English **Intermediate**

## Experience

### Vocational

2011– **Software Engineer**, *PowerMeMobile*, Minsk.  
Telecom billing.

- Built on Erlang/OTP.

- 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.
- 2010–2011 **Software Engineer**, *Synesis*, Minsk.  
iPhone VoIP app (<http://viber.com>).
- Bugfixing;
  - Helper tools for developers.
- 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 using OCaml;
  - A lot of tests.
- 2010– **Sole developer.**  
QuakeC bytecode to native code library compiler.  
<https://github.com/ftrvxmtrx/qc2lib>
- OCaml;
  - LLVM usage in the future.
- 2010– **Maintainer.**  
Arch Linux AUR packages.  
[https://aur.archlinux.org/packages.php?O=0&K=ftrvxmtrx&do\\_Search=Go&detail=1&C=0&SeB=m](https://aur.archlinux.org/packages.php?O=0&K=ftrvxmtrx&do_Search=Go&detail=1&C=0&SeB=m)
- 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-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

## Personal information

- Age 24
- Marital status married
- Kids no