Kamil Kowalczyk

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EXPERIENCE

Phoenix Systems

Intern   Warsaw, Poland

- Implementing futex synchronization in Phoenix RTOS' kernel
- Implementing futex-based mutexes and condition variables
- Changing bits of Phoenix RTOS' libc to use futexes
- Testing on NXP IMXRT1174 evaulation kit and STM32N6X7 board

EDUCATION

Zespol szkol nr 36 im. Marcina Kasprzaka

Programming Technician   Warsaw, Poland

- Front-end applications and websites, Database administration, Game programming

SKILLS / OBJECTIVES

Programming languages : C, Rust, x86 assembly, Java, Go
Tools : Vim, Unix utilities, docker, git
Devops : Nginx setup, certbot, Gitea administration, Gitea CI/Actions, NetBSD, Linux, proxmox
Communication : English – fluent (FCE), German – advanced
Interested in : OS development, hardware drivers, concurrent programming
Soft skills : Hosting lectures, knowledge sharing, technical blogging

PROJECTS

MOP3 Operating System – Git repository – Project website

- MOP3 is a non-POSIX, preemptive, hobby operating system made entirely from scratch
- Made for the x86_64 architecture
- Runs on real hardware: link to a video
- Development is documented on my blog

GEBS (a build system for C) – Git repository

- Build recipes are written as C programs
- Requires only a working C compiler toolchain (no external tools)
- The build system can rebuild itself automatically
- Provides useful utilities: an arena allocator, dynamic arrays/strings

z80emu – Git repository

- Emulates a large portion of Zilog Z80 processor's instruction set
- Provides a screen buffer for drawing
- Runs programs assembled by sbasm
- Small plugin system for implementing I/O devices like a keyboard
- GUI debugger written using ImGUI python bindings

Yup programming language – Git repository

- Compiler for a made up programming language
- Written in Go using LLVM compiler infrastructure
- Can be used to write simple algorithms: Fibonacci numbers