ANATOLY YAKOVENKO

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SUMMARY

Software developer with over 10 years of experience in embedded operating systems, developing patents, leading projects and contributing to large groups including Linux Kernel, with a focus on performance and optimization for Qualcomm ARM and DSP processors.

SKILLS

Hardware and Systems

- Embedded Operating Systems, Linux Kernel, Android, Qualcomm MSMs, System MMUs, ARM, Hexagon DSP

Languages and Tools

- C, C++, Haskell, Lua, Make, Python, Ruby, Git, Perforce, GDB, Trace32

WORK EXPERIENCE

Qualcomm, San Diego CA

Senior Staff Engineer, 2012 to Present

Staff Engineer, 2008 - 2012

Senior Engineer, 2006 - 2009

Engineer, 2003 - 2006

- FastRPC, a bridge between the DSP co-processor and ARM processor for high performance applications, on Windows, Qnx, Android Linux Kernel. Patents: 20140136817, 20140096148

- IDL (Interface Description Language) compiler for Hexagon SDK

- Dynamic linker for loading dynamic processes on Qualcomms embedded DSP OS

- Dynamic module framework for loading shared objects on DSP from the application processor

- Capability based application framework for BREW (Qualcomm's Mobile Operating System)

- Component Object Model IPC (Inter-Process Communication) implementation for BREW

- IDL compiler with C/C++/Lua backends for BREW IPC

- Elf manipulator with a DSL (Domain Specific Language) in Lua

- System call trace tool for BREW IPC with a Lua DSL.

- Build system plugins for unit testing and verifying code coverage

- Declarative full featured object library for C with C++ compatible v-tables, in less then 500 bytes of RO arm object code

- Prototype and test generation tool for rapid development of BREW components

- Network components using SIP/HTTP/RTP and proprietary standards for QChat push to talk service

- High performance logging tools to handle tens of thousands of transactions per second from many networked components

Alescere LLC, Lisle IL, 2001 to 2003

Co-Founder, 2001 to 2003

- Founding member of Alescere, a VOIP startup

- SIP and RTP protocol stacks, and server components for a VoIP system for small businesses

University of Illinois at Urbana-Champaign

Research Assistant, 2003

- Web server that supports QoS for HTTP requests

- Probabilistic scheduler for the Linux kernel

- Roaming protocol for 802.11a/b networks for NetBSD

Personal Research

- Neural Networks, Genetic Algorithms, Markov Models, and Bayes Inference Algorithms

EDUCATION

Bachelor of Science in Computer Science

University of Illinois at Urbana-Champaign, 2003