

# ANATOLY YAKOVENKO

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## SUMMARY

Software developer with over 10 years of experience in embedded operating systems, shipping software on millions of units, 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, RTOS, Linux Kernel, Android, Qualcomm MSMs, System MMUs, ARM, Hexagon DSP

### *Languages and Tools*

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

## WORK EXPERIENCE

### *Qualcomm, San Diego CA*

Senior Staff Engineer, 2012 to Present

Staff Engineer, 2008 - 2012

Senior Engineer, 2006 - 2009

Engineer, 2003 - 2006

- Heterogeneous Multicore Compute  
Lead development of FastRPC, a brand new technology featured in [Hexagon SDK](#) for off-loading computations between ARM and DSP co-processors on Qualcomm's mobile chips. Achieved a 10x reduction in co-processor communication latency. Designed and developed [Linux Kernel](#), Qnx and Qurt RTOS drivers. Developed several [patents](#), and commercialized on modern Android, Windows and Qnx devices. Worked with internal and third party developers on performance and power optimizations of Computer Vision, Augmented Reality, and 3D Camera technologies utilizing Qualcomm's DSP.
- Mobile Operating Systems  
Lead developer of Inter-Process Communication for BREW, Qualcomm's mobile operating system - shipped on thousands of devices and millions of units. Built commercial quality developer tools such as custom IDL compilers, mock object generators, elf parsers, and system call trace tools. Wrote unit test coverage frameworks with an exception simulator, achieving 100% code coverage in critical pieces of the kernel. Lead interface and code reviews, enforcing strict requirements for API binary backwards compatibility, performance, and application and kernel security.
- QChat Push To Talk  
Developed network components using SIP/HTTP/RTP and proprietary standards for QChat Push To Talk service. Designed high performance logging tools to handle tens of thousands of transactions per second from many networked components with a real-time monitoring system.

### *Alescere LLC, Lisle IL*

Co-Founder, 2001 to 2003

- Founding member of [Alescere](#), a VOIP startup  
Lead development of SIP and [RTP](#) protocol stacks and server components for a VoIP system for small businesses.

## ***University of Illinois at Urbana-Champaign***

### **Research Assistant, 2003**

- Developed a web server that supports QoS for HTTP requests
- Designed a probabilistic scheduler for the Linux kernel
- Implemented a roaming protocol for 802.11a/b networks for NetBSD

### ***Personal Research***

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

## **References**

- Brian Kelley, Senior Director of Technology, [bkelly@quicinc.com](mailto:bkelly@quicinc.com)
- Rob Walker, Senior Director of Engineering, [rwalker@quicinc.com](mailto:rwalker@quicinc.com)
- Ramesh Chandrasekhar, Director of Engineering, [rameshc@qti.qualcomm.com](mailto:rameshc@qti.qualcomm.com)

## **EDUCATION**

### ***Bachelor of Science in Computer Science***

University of Illinois at Urbana-Champaign, 2003