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Background

Starting in my early teens I began writing PC applications in my free time -- from simple task automation to developing a badge barcode scanning framework for a bookstore. While in college I worked as a QA Analyst supporting the launch of EverQuest II, and a week after I graduated from University I began my first full time job commercializing PlayStation 3 games. After investing several years in professional game development, I decided to pursue software development in the telecom industry. Since joining Qualcomm I have worked on many projects, with most of my time spent developing a modem-based voice and video over IP (VoIP/VoLTE/ViLTE) solution now used by Android phones across the globe.

Experience

Senior Engineer at Qualcomm Technologies, Inc.

5 yrs, 10 mos (May 2010 - Present)

- Launched Modem-based Voice and Video Over IP based on 3gpp Standards (IR92, IR94)
- Launching IMS with wireless operators across the world (VzW, ATT, TMobile, DoCoMo)
- Facilitating countless device manufacturers to integrate IMS (Sony, HTC, Motorola, Sharp)
- Developed an unreleased Mobile App Store for BREW OS
- Maintaining QChat push-to-talk modem client
- SIP call flows and protocol headers (registration, call setup, call modify)
- SDP based media negotiation using voice+video+text, preconditions, SDPCapNeg

C++ Game Programmer at Kalloc Studios, Inc.

2 yrs, 10 mos (Aug 2007 - May 2010)

- Launched internationally-published PS3 titles: [The Saboteur] [Destroy All Humans! 3] [Puzzle Quest: Galactrix] [Puzzle Chronicles]
- Write and maintain PS3 code based on original Xbox360 source
- Develop tools to manipulate meta data used by internal and external content pipelines
- Implement PS3-specific features using Sony's PS3 APIs including: file I/O; game data; save game systems; audio systems; online gameplay; game statistics; leaderboards
- Develop cross-platform multiplayer network connection and handling
- Maintain and enhance multiple third-party libraries within all company games

Engineering QA Analyst at Sony Online Entertainment 1 yr, 2 mos (Aug 2004 - Sep 2005)

- Launched MMO RPG [EverQuest II]
- Create and conduct test cases for engineer team's code changes
- Plan with engineers to develop useful test cases and report regression
- Meet with Test Server players for zero-day issues
- Review and submit bugs verified by outsourced QA team
- Verify Engineering release notes

Education

San Diego State University

Bachelors Degree, Computer Science

2007 2007 Spring

Dean's List - Semester Honors

Dean's List - Semester Honors

Dean's List - Semester Honors

2006 Fall 2006 Summer

Additional

Recent Endorsements

@Qualcomm

10/2015 | Thanks for your extraordinary contribution to CMCC VoLTE launch with Hisense M821 device! • Staff Engineer 06/2015 | In appreciation for your huge contributions on 6 major MSM8994 phones launches for Japan 3 operators at the same time. This could not be achieved without your excellent and tireless support. It is also the great achievement for Qualcomm IMS solution • Director of Engineering

06/2014 | In appreciation for your huge contributions on the timely and excellent support to SOMC and Sharp VoLTE phones for Docomo, 1st major VoLTE/VT operator in the world, which achieved Qualcomm great IMS milestone. • Director of Engineering 04/2014 | Thanks and appreciation for your hard work, dedication, commitment and sacrifices you made in last 2 months for Motorola LE support for Verizon. Thanks once again for your outstanding support. • Principal Engineer/Manager 08/2013 | VzW VoLTE and VT ePDG Waltham IOT Efforts • Director of Engineering

 $08/2013 \mid \text{For innovative thinking about Unit Tesing Framework for QIPCALL module and your dedication and hardwork to implementing it.} \bullet Senior Staff Engineer/Manager$

 $10/2010 \mid Nathan you did an excellent job to track down the SURF BMP builds for the ETM analysis for ATT performance activity. You tirelessly dogged down every issue with the build to get it working. Good Job! • Senior Director of Engineering <math display="block">08/2010 \mid Thank you for all your hard work and dedication to make the Verizon Storefront Application Upgrader a reality. Well Done! • Senior Program Manager$

Side Projects

I own several Raspberry Pis and enjoy tinkering with web technologies in my free time. I'm very interested in almost all aspects and languages of software development. I've built all my own desktops from parts since around age 12. I love thinking about and talking about all aspects of modern computing -- from wearables to deep learning.

Skills

C++ nginx Real Time OS Go Golang **Unreal Engine** Torque Engine Java Ogre3D Visual Basic C# N3D TinyXML Python Perl **FMOD Javascript** Wwise PHP Bink

Boost
OS Loki
gine Luabind
gine STD
STL
Google Test
Google Mock
PS3
Xbox 360
Perforce

SVN Git Mobile SIP SDP Media Negotiation AMR AMR-WB H263

H264

H265 Runtime Tradeoffs Problem Solving Software Arch Cont. Integration Test Driven Dev Automation Refactoring Optimization Frameworks