

Ronald Burr, PhD

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TECHNOLOGY ARCHITECT & LEADER

Accomplished technical and business operations executive with a solid track record of success leading and driving innovative product development and operational improvements across diverse, cross-functional disciplines. Structured problem-solver and closer; astute systems thinker. Successful at building corporate infrastructures and establishing operating controls that facilitate smooth operations during periods of significant change and growth. Talent for developing high-performance teams, making effective decisions and quickly revising tactics to achieve goals within aggressive time frames. Adept in Lean Six Sigma (LSS) and Agile practices and principles. Awarded over 20 patents and wrote in excess of 20 technical papers including invited keynotes and best-in-session honors. Focus on innovative product development, numerical simulations, modeling, machine learning, search, and business intelligence. Delivered 100+ software applications to date, with new technologies. Held multiple board appointments and academic collaborations across platforms i.e. business web applications, medical instruments, aerospace, and image and information processing.

Strong Negotiation & Influential Skills
Lean Six Sigma/DFSS & Statistical Engineering
Policy & Procedure Analysis / Development

Project / Program Management (Agile) & Business Intelligence
Innovative Product Design & Development / Multiple Patents
Quality Assurance / Controls Oversight & Compliance / Regulatory

PROFESSIONAL OVERVIEW

THE CANTON GROUP, Baltimore, MD

2014 – Present

Chief Technology & Operating Officer (CTO/COO): Direct business operations including portfolio development, support, quality assurance, risk assessment and mitigation, and requirements management systems using various development methodologies from agile sprints to multi-year contracts. Develop and implement numerous products, systems, processes, and tools for web and software (IT and embedded) applications. Manage product development efforts while ensuring quality systems overseeing user requirements, design, and technology concepts through entire project lifecycles from concept through launch and support.

- Develop and cultivate key client partnerships across government (federal, state, city), university, association, commercial enterprise, and small and medium size (SMB) business and organizations.
- Develop and implement architecture and code for web and embedded product software: Node.js, Python, PHP, React/Angular, Javascript/JQuery/ES6, HTML5/SASS/CSS, MySQL/Postgres/SqlServer, Ruby/Java/C/C++/C#, Elastic, AI/ML and AWS.
- Scope of efforts include concept analysis/requirements, design, execution, and testing through release and support.
- Manage diverse, seamless integrations of systems and applications including user authentication, finance and commerce analytics & metrics, search, BI, data warehousing, and machine learning working with team.
- Migrated legacy software and technology to updated cloud-based and automated systems across the company and for various clients. Infused best practices across all projects; increased use of progressive technology and tools; and ensured employee growth initiatives were implemented.
- Built, trained, developed, and coached team with case study projects and learning sessions. Team has received several SmartCEO Future 50 and Culture awards.

STONEFLY SYSTEMS / BLUE WATER MEDIA, Parkton/Greenbelt, MD

2012 – 2014

Chief Technology Officer: Built and led cross-functional teams to develop and implement various products, systems, processes, and tools emphasizing software-driven (embedded) devices and web-based tools across the medical and IT industries. Managed program development and assured quality systems through diligent design and timelines throughout project lifecycle scopes. Employed Agile and LSS methods to maintain milestones and meet deliverables timelines in a cost-efficient manner. Oversaw quality, compliance and regulatory efforts.

- Headed teams in all system and software architecture and code development for numerous product software items from concept analysis and design implementation through testing and release/support (DevOps).
- Technologies include: PHP, Laravel, Drupal, HTML, JavaScript/jQuery, SASS/CSS, MySQL, Java, and C/C++/C#

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- Developed and nurtured key client partnerships to spur product development and sales.
- Collaborated with departments, stakeholders, and executives to ensure streamlining of technical initiatives with corporate objectives and goals. Honored with the SmartCEO Chief Technology Officer (CXO) Excellence award in 2012.

CSA MEDICAL, Baltimore, MD

2008 – 2012

CTO: Crafted, trained, mentored, and led cross-functional teams across the R&D, Operations, Service, and Quality-Regulatory, and Information Technology divisions.

- Innovated and developed a patented next generation cryospray system platform including user validations, regulatory clearance, instrument, embedded software, and disposable kits.
- Applied Six Sigma continuous improvement processes to drive ease-of-use and reliability of existing platforms from under 6 months to over 11 years mean time between failures.
- Designed, developed, deployed, and maintained transition to a cloud-based information technology infrastructure including communications, data storage, backup, and custom web-based work process tools.
- Collaborated with physicians and stakeholders to generate concept and prototype in the lab and field. Built procedure simulation lab resulting in physicians adopting, promoting, publishing, referring, and supporting clinical trials.
- Implemented and customized web / cloud using *PHP, MySQL, and Drupal CMS* for Quality Systems.

EARLIER ENGAGEMENTS

Platform Manager & Lead System Engineer, Becton-Dickinson Medical Diagnostics Systems: Managed both programs and a staff of R&D, operations, support, clinical, quality, and regulatory personnel throughout all aspects of product development including design, implementation, validation, FDA clearance, and launch / support. Optimized and validated *Viper ER* integrating automated sample processing with automatic on-board molecular amplification and optical detection. Developed *Viper XTR*, next generation platform with increased sensitivity, automation and ease-of-use through clinical trials and a highly successful market launch and share. Product was adopted by the largest reference lab (Quest). Received "Howe Award" for Technology Innovation and Product Market Success.

CTO / COO, Macrosonix Inc: Led development of technology and production processes for patented high power acoustic industrial processing equipment with linear motors / actuators and embedded electronic controllers. Established a highly tailored and customized manufacturing operation subsequently licensed for ongoing sales and manufacturing operations. Developed, patented, and introduced the first industrial sonic mixers in 2, 20, and 200 liter models. Directed all stages of acoustic R&D from core technology development to production, scalability, and reliability. Developed / executed strategic plan for new acoustic refrigeration, electronics cooling, and compressors. Oversaw a team of 30 managers, scientists, engineers, technicians, and production personnel. Technology / product selected for cover article of Powder Processing and Best Research Paper at IThERM.

Technical Fellow & Director, R&D, Tektronix: Directed and performed all stages of R&D including research, design, testing, pilot production, and reliability for this global manufacturer of business and specialty printing and imaging. Helped grow business from start-up to \$1B in annual sales. Saved \$5M annually in warranty costs by developing, validating, and patenting improved PZT bonding and temperature control methods enhancing print head life by up to 200%. Honored with both the Howard Vollum (Founder) and the President awards for the development of novel tools design. Named recipient of PC Magazine's "Technology Excellence" award.

EDUCATION & CERTIFICATIONS

Doctorate (PhD) & Master of Science, Mechanical Engineering & Supercomputing, University of Illinois & NCSA, Urbana, IL
Focus on Thermals System Controls, Simulation & Optimization. NASA & Kritzer Fellowships.

Master of Science in Mechanical Engineering, University of Southern California, Los Angeles, CA
Focus on Embedded Control System Design, Simulation, and Optimization.

Bachelor of Science in Mechanical Engineering, University of Washington, Seattle, WA
Summa Cum Laude, Scholarships.