#### **Executive Profile**

Accomplished executive with a history of running large technology organizations, from early stage startups to large divisions of S&P 500 corporations. Strategic consultant and forward-thinking technology and architecture expert, with a unique understanding of the low-level "bits" (as a formal kernel programmer) as well as the business rules and implications. Successful at managing diverse engineers and stakeholders, while digging in and writing code where necessary.

## **Skill Highlights**

- Highly successful manager of technical people, with a proven track record of increasing output and quality
- 30+ years of experience in technology
- 25+ years of management experience
- 20+ years of executive experience
- Founder of 3 startups, one with buyout by public company
- Early architect of UNIX Operating Systems and matters of data and system security and privacy

- Adjunct Professor of Computer Science at Nova Southeastern University
- Lectures regularly at several Universities, as well as Fortune 50 companies on a variety of topics
- Highly skilled in reverse engineering and source code analysis
- Knowledge and coding experience of most computer languages, including many assembly languages

## **Professional Experience**

#### President

February 2005 – Present

Quogic, Inc. – Ft. Lauderdale, FL

Perform per-project consulting for corporate clients, which have included:

Intel Corporation (via Berkeley Research Group) – Board/executive level strategic consulting AEther, LLC – Inflight entertainment system architecture and development Virgin America Airlines – Inflight entertainment system architecture

BidKind, LLC – Charity auction site architecture and development management HockeyTech, Inc. – Sports management software architecture and development Several law firms as testifying and consulting expert witness

#### Director

September 2012 – Present

**Berkeley Research Group** 

Testifying and consulting expert in highly-technical litigation and large-scale corporate and

board level consulting. Gives testimony in Federal Court, State Court, Depositions and Arbitrations. Writes export reports as an independent expert for litigation. Technical advisory consulting work for all types of companies and boards of directors. Litigation support includes source code reviews in many languages, architecture review, and advice on software trade secret and copyright issues.

# Adjunct Professor of Computer Science, Board Member: Graduate School of Computer Science

August 2013 – Present

Nova Southeastern University, Ft. Lauderdale, FL

Classes in Cyber Security and Operating Systems

## **Chief Technology Officer (NON-POLITICAL POSITION)**

May 2015 – October 2015

Rand Paul for President - Washington, DC

Head of technology for a campaign for the Presidency of the United States of America. Managed vendors and staff. Designed and architected all aspects of technology, including mobile applications, website functionality, software development kits, and APIs. Ran first presidential campaign hackathon. Architected first presidential campaign SDK. Mobile application allowed voters to let their voice be heard about how the Senator should vote on bills. Worked with team to design data analysis process and develop large, scalable data warehouses for use in all aspects of campaign.

#### President

August 2012 to August 2013 **Invenstar, LLC** – Boca Raton, FL

Ran day-to-day operations of hardware and software manufacturing company in the point-of-sale space for retail establishments. Architected cloud-based point-of-sale system and managed all developers.

#### **General Manager - Chief Executive**

May 2005 to August 2011

**Technical Committee** – Bellevue, WA and Palo Alto, CA

Ran day-to-day operations (as chief executive) of private corporation ordered to be formed by the United States Courts. This corporation was tasked with monitoring Microsoft Corp., ensuring their compliance with the Final Judgments in the US v. Microsoft/NY v. Microsoft antitrust case filed in 1998. Daily interaction with Microsoft executive and senior staff, Microsoft competitors and partners, Attorneys General/Deputies for multiple states, Assistant Attorneys General for the United States, and representatives from other countries. Was responsible for responding to potential complaints from 3rd parties. Hired over 90 people to work in 3 offices.

## **Vice President**

April 2002 to January 2005

Equifax Corporation – Boca Raton, FL

Head of software development, network relations, privacy and data security, new product development, and data enhancement delivery technology for the Internet Marketing division of Equifax, at the time a 105-year-old company. Was responsible for architecting software

products, B-to-B processes, and assigning personnel. Responsible for long-term planning for strategy and expenditures. Interfaced with key people at vendors, clients, and service providers. Oversaw integration of major corporate acquisitions, creating efficiencies in technologies and personnel. Created partnerships and was liaison with companies including AOL, Yahoo, and Microsoft. Headed team that coordinated data enhancement of client databases, and delivered enhanced data to those clients. Implemented processes, quality controls, project planning and client interfaces by technical staff. Chairperson of committee that made decisions on types of marketing accepted, approval for types of clients/messages, and responses to complaints. Performed integration of several acquired companies, including technical integration as well as integration of staff and other efficiencies of scale. Spoke on behalf of Equifax at the Federal Trade Commission (FTC) on *spam* and anti-spam technology.

## Senior Vice President, Chief Technology Officer

February 2000 to February 2002

**Voice and Wireless Corp** – Minneapolis, MN

Responsible for all technology decisions for the public company that acquired Mail Call, Inc. in 2000. Made product decisions, architected product enhancements, and recommended technology direction. Oversaw acquisitions of other technology companies. Participated in due diligence for potential acquisitions, and interfaced with other potential buyers of technology. Spoke at shareholder meetings and other shareholder events.

## Founder, President, Chief Technology Officer

May 1997 to February 2002

Mail Call, Inc. – Pembroke Pines, FL

Founder of corporation providing a service to business consumers, allowing them to retrieve and manage their E-Mail over the phone. Performed project design, project management, data privacy and security, all software programming and testing. Negotiated contracts with all partners, including GTE, Verizon, Concentric Networks, Net2Phone, IDT, Earthlink, Casio, Knight-Ridder, T-Mobile (Voicestream) and others. Managed all staff. Implemented exit strategy by negotiating buyout by Voice and Wireless Corp.

#### **President**

February 1994 to January 2003 **Driver Aces, Inc** –Miami, FL

President of corporation specializing in developing device drivers for the UNIX operating system. Performed project design, project management, driver design, driver authoring, driver testing, customer contact, sales, and staff management. Customers included Sun Microsystems, IBM, Digital Equipment, SCO, Lucent Technologies, and others. Drivers were for high-speed networking devices, including fast Ethernet, token-ring, and fiber-optic, SCSI devices, RAID controllers, serial devices, parallel devices, and pseudo-devices. Managed staff of developers.

# **Consultant - Kernel Programmer**

January 1992 to June 1995

Sun Microsystems – Los Angeles, CA

Worked in the Peripherals Engineering group, Multiprocessor group, and Device Driver group. Was responsible for various programming and testing on Solaris 2.1, 2.4, 2.5, and 2.5.1. Wrote

kernel and driver code for Solaris x86, Sparc, and PowerPC. Performed bug-fixing, authoring of system software, kernel enhancement, and device driver authoring for high-performance network and serial drivers. Was responsible for development of device driver porting kit. Wrote a book entitled Solaris 2.1 Guide to Porting SVR4.0 Device Drivers for x86. Worked with Independent Hardware Vendors on getting device drivers ported to Solaris. Re-wrote existing network drivers to improve network performance and to add multiprocessor/multithreaded functionality.

## **Principal Member of Technical Staff**

September 1991 to December 1992

Encore Computer Corp. - Ft. Lauderdale, FL

Worked on new massively parallel hardware, developing UMAX V in the kernel development group. Developed device drivers for new memory cards, fixed kernel bugs, worked in a team implementing RPC system, and worked on tcp/ip network code for use on a proprietary network.

#### Founder, President

March 1990 to June 1991

Secure Online Systems, Inc. – Los Angeles, CA

President and founder of a software company that developed and marketed system management software for UNIX, specializing in data security. Designed packages, then managed development project. Investigated strategic relationships in order to create channels of distribution. Managed office staff including programming and marketing. Designed and oversaw creation of product brochures. Wrote new device drivers, kernel modifications, applications in X-windows including Motif, TCP/IP applications, database applications, and screen management routines.

# **Consultant - Development manager and kernel programmer**

September 1988 to February 1990

IBM Corp. – Los Angeles, CA

Worked on AIX/370 and AIX PS/2. Was site lead architect and made many design decisions affecting the end product. Worked on kernel, commands, customer support, and applications. Supervised 15 programmers and testers who reported directly to me. Implemented new device drivers, fixed many bugs, made changes to TCP/IP layer, hired new employees, made OS POSIX compliant, and taught several classes. Also worked on internals of TCF (transparent computing facility) on site at Locus Computing Corporation.

## **Consultant - Kernel Programmer**

May 1987 to September 1988

AT&T Bell Laboratories - Summit, NJ

Worked on the UNIX project, developing UNIX System V release 4.0, in kernel development group. Developed new "filesystem independent boot" feature and a new filesystem type; fixed performance, security, and fault types of bugs in UNIX kernel; wrote a new hard disk device driver; oversaw software development contracted out to remote sites; acted as a mentor to new employees; was part of the design and architecture teams dealing with firmware and machine diagnostics; and interacted directly with Sun Microsystems on joint software development.

#### **Academia and Education**

Syracuse University Nova Southeastern University

YPO Palm Beach YPO Southeast US and Caribbean Region Master of Science, Computer Science Professor of Computer Science (present) Board, Graduate School of CS (present) Education Chair, Vice Chapter Chair Education Chair (present)

## **Personal Information**

- Instrument rated pilot for 25 years; donates pilot time and aircraft to Angel Flight
- Arbitrator since 2000 for the state of Florida, hearing and deciding cases several times a month, usually for the Lemon Law
- Wrote freeware text adventure game that ships with all modern versions of the UNIX Operating System, including Mac OS
- Captain US Polo Bears International Segway Polo Team