William Stanislaus

Engineering Leader & Specialist in Embedded Systems, Networking Protocols, and Firmware | Proven Track Record in Driving Innovation | YC Alum - Co-Founder at Grabb-It Inc (YC-S18)
Fremont, California, United States

Summary

With over 24 years of experience driving complex enterprise initiatives, I bring deep technical expertise and leadership capabilities across engineering, product, and program management. My career has focused on building and leading high-performing global software teams that deliver industry-leading networking products, including routers, firewalls, and wireless solutions.

My technical background in networking protocols, Linux kernel development, drivers, bootloaders, and platform software has enabled me to make key architectural decisions and drive technology strategy. By fostering a collaborative yet deadline-driven culture, I accelerated innovation cycles from conception to launch and streamlined manufacturing and certification processes.

I thoroughly enjoy mentoring engineers, nurturing talent, and developing organizational capabilities. Key highlights of my career include leading the development of GNSS receivers, high-speed image acquisition systems, and precision motion control systems, as well as co-founding Grabb-it Inc. and holding multiple patents for innovations in network architecture and wireless control.

As technology advances at a rapid pace, I look forward to blending my engineering expertise, product vision, and leadership experience to deliver successful outcomes in dynamic environments. The relentless pursuit of excellence continues to motivate me.

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Experience

Picarro

Sr. Embedded Software Engineer
June 2024 - Present (11 months)
Santa Clara, California, United States

Tagus
1 year

Senior Technical Consultant - Platform/Embedded/Firmware Engineer
November 2023 - June 2024 (8 months)
Topcon (www.topconpositioning.com)

- Design and development of GNSS receiver (HiPer XR) Platform which
consists of ARM cortex 32bit Processor (Core CPU), Microchip ATmega168
microcontroller for power management and front panel LED control, Satel/
Alinco UHF radio modem, Mosaic GPS module, Cinterion LTE module and
Maya-W266 WiFi/BT module.
- Main work involved in CPU <=> MCU communication via SPI interface and
front panel power button interaction (HMI) using I2C and GPIO.
- Collaborate and actively engage with HW team to review HW design
revisions and schematic. Implement changes in firmware software.
-     TeamCity CI/CD integration and automation smoke and sanity support.
TestRail automation testing infrastructure support.

MIT: Applied Data Science Program
July 2023 - October 2023 (4 months)

10x Genomics
Senior Embedded/Firmware Engineer
September 2019 - July 2023 (3 years 11 months)
Pleasanton, California, United States

Design and Development of Xenium Analyzer platform and product:
• Responsible for design and development of imaging motion solution using
elmo maestro controller and twitters.
◦ Motion stage consists of multiple axis such as XY stage (Sample carrier
axis), objective (camera lens axis) and filter axis. All controlled by a motion
solution controller application written in cpp.
◦ Hardware trigger to camera frame acquirer once stage settles on a specific
multi-dimensional field of view (FOV)
• Responsible for design and development of reagents deckmap inventory,
which initializes reagents getting loaded based on RFID tags and maintains
the reagents usage and availability during the protocol/experiment run.
• Responsible for design and development of machine vision subsystem which
maintains the coordinate system across fluidics motion subsystem (reagents
deckmap, ADP and sipper motion controllers) and imaging motion subsystem.
• Entire software stack is built on python and cpp infrastructure.

Grabb-It (S18 - YC backed Startup)
Co-Founder & CTO
June 2017 - September 2019 (2 years 4 months)

Concept, Designed and developed Grabb-it Geo-target platform end-to-end single handedly, which includes:

* Compute unit with GPS and LTE module: Built prototype board from scratch using various off-the-shelf proto boards such as Raspberry Pi and Tinkerboard. Explored various business models for location tracking using driver smart phone, OBD device and finally decided to go with built-in LTE and GPS module using Quectel and SIMtech.

* WiFi monitoring module: Built out-door advertising differentiator component, which is impression count or potential campaign reach-out using monitoring WiFi smart phones around the Grabb-it car display screen using directional antenna and analytics based on distance of the viewers.

* Mount design without modifying car interior for fixing Grabb-it devices inside car and easy turn on and off access to driver.

* Complete HW selection, evaluation, prototyping and assembly for all the Grabb-it units we have so far.

* Cloud Server development using docker container in AWS for customer portal and Client server application for compute units to communicate and pull advertisement for the car location.

* Grabb-it Web server and customer portal running on Java based web-stack on one of the AWS instances with Load balancer.

* Grabb-it client server application running on Python web server application in multiple auto-scale capable docker containers and front end load balancer.

Operations management:
* Hired food delivery drivers, inspection, screening of drivers and deployed Grabb-it devices in driver cars during initial phase of Grabb-it.
* Later, hired SF operations manager and scaled SF pilot to more than 50 cars.

Business development and fund raising:
* Participated in every Grabb-it business decisions.
* Involved strategic partnership for Grabb-it growth.
* Approached businesses and companies for strategic partnerships.
* Participated and raised fund for Grabb-it from well known VC's and Angel Investors.

Ericsson
Principal Platform Software Engineer

July 2014 - June 2018 (4 years)
San Jose

• Design and Platform software development (board bring up) of next generation Ericsson SSR (smart services router) SSR-8801
• Responsible for Lead, design and develop various linux kernel device drivers (NVRAM, HW watchdog, FPGA and CLPD) for Freescale T2080 and user-space applications (Chassis management, multi-node IPC end points etc) as part of platform bring up
• Technical Leadership role on Freescale T2080 and Broadwell x86 bring up (Boot Loader, Linux, device drivers and applications).

NETGEAR
Sr. Engineering Manager - Commercial Business Unit - Wireless Switching
July 2012 - July 2014 (2 years 1 month)
San Jose

• Design and architect Enterprise WLAN controller and Access Points.
• Manage and handle wireless LAN product customer support issues.
• Technical and people Management of off-shore team of 20+ engineers.
• Involve in recruiting engineers for WLAN development and testing.

Avaya
Software Engineering Manager
January 2010 - July 2012 (2 years 7 months)
Santa Clara, CA

• Design and Architect of Avaya WLAN 8100 Product which includes Wireless Controllers and Access Points, successfully delivered multiple releases on time with high quality.
• Technical and people Management of onsite team with 10+ engineers and co-ordinate with off-shore team of 12+ engineers managed by off-shore manager.
• Recruite contracting engineers from partners. Train and mentor them and brought up to speed in the product development.
• Analyze product requirement document from PLM, prepare compliancy matrix, organize design document reviews with PLM, prepare schedule milestones and commit on the release feature list and schedule.
• Prepare weekly reports on health of the project and provide to top management.

Nortel Networks
WLAN Senior Software Engg

April 2007 - January 2010 (2 years 10 months)

Design, development, testing and support for Nortel Networks WLAN 8100
Product
• Wireless Controller 8180 and Access Point 8120 broad bring up including
Uboot and regulatory support.
• Design and implementation of Mobility Control Protocol(MCP), protocol
between WLAN mobility controller and WLAN mobility switch.
• Porting and enhancements to Broadcom WLAN Controller code to Nortel
WLAN Controller platform.
• Porting and enhancements to Broadcom AP code. To Nortel WLAN AP
platform.
• Design and development of Wireless Data Plane module . (WDP).

Design, development, testing and support for Nortel Networks VPN Gateway
(NVG) 3050/3070 NVG box.

California Software Company Ltd
Technical Consultant
April 2004 - March 2007 (3 years)

Design, development, testing and support for Nortel Networks Switched
Firewall
• IPv6 (RFC 2460) feature enhancement with proprietary protocol
Implementation (NAAP, communication between Nortel Director and
Accelerator) for Nortel Network Security Firewall Switch (NFS) 60xx series.
• Port Nortel Network Security Firewall Switch (NFS) 60xx series source code
from RedHat 7.2 to RedHat Enterprise Linux 3.0 (Kernel as well as user space
modules)
• Implement DHCP/BOOTP relay agent (RFC 1542, Section 4) for Nortel
Network Alteon security firewall switch 51xx series.
• Feature enhancements to already existing VRRP (RFC 2338) implementation
in a cluster mode for Nortel Network Alteon security firewall switch 51xx series.
• Feature enhancement and support for L2-L3 bridging.

University of Aberdeen
Research Student
October 2004 - October 2005 (1 year 1 month)

• Datagram congestion control protocol (RFC 4340) implementation on Linux
kernel and testing on real-time audio and video streaming.
• UDP-Lite protocol (RFC 3828) implementation on Linux kernel and testing.
Modified VideoLAN Client (VLC) to support UDP-Lite and DCCP as transport

protocol and verified the various BER on satellite network. Implemented cross-layer technique in satellite receiver terminal, which includes MAC-Lite implementation for DVB-RCS terminal.

• Implemented Satellite video conferencing and distance learning platform for European Space Agency (ESA) and Satellite communications network for excellence (SatNEx).

• Tested and deployed PIM-SM, PIM-SSM in Inmarsat autonomous system.

Future Software Ltd
Design Engineer
February 2000 - March 2004 (4 years 2 months)

Design, development and testing for DVB-RCS router product and networking protocol analyzers product and support for their protocol stack.

• Implemented new protocols from the scratch. Generic Routing Encapsulation (GRE) (RFC 2784) and Uni-Directional Link Routing Protocol (UDLR) (RFC 3077).

• Porting and bug fixing for Future Software IPSec product for DVB-RCS terminal.

• Enhancement, bug fixing and maintenance of Future Software IPv4 stack which includes IPv4, TCP, UDP and RIPv2. Worked on IP fast forwarding module.

• Performance analysis for DVB-RCS terminal and generated report.

• Implemented Session Initiation Protocol (SIP) (RFC 2543) and Session Description Protocol (SDP) (RFC 2327) from the scratch for NetTest Multi-channel Protocol Analyzer product.

• Implemented Global System for Mobile communication – MAP Phase 2+ (ETSI EN 300 607-1 V8.1.1 (2000-10)) and British Telecommunication Network Requirement (BTNR-167)

Education

University of Aberdeen
Master of Science by Research, Communication Engineering (satellite communication) · (2004 - 2005)

University of Madras
Bachelor of Engineering, Computer Science & Engineering · (1995 - 1999)