ARI KAMLANI

US CITIZEN
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Technologist • Innovator • Strategist
Consumer Electronics • Sports Technology • Media & Entertainment

Innovative engineering professional skilled in formulating strategic opportunities, technology assessment, Proof of Concept (POC) designs, and independent research.

PROFESSIONAL EXPERIENCE

NAGRA KUDELSKI GROUP, San Francisco, California • 2012-Present
Leader in Digital Television, Digital Security, and Public Access Control.

Software Expert - Group Innovation
Technologist within R&D Innovation Group responsible for Technology and Application Advancement focused 3-5 years ahead.

Selected Accomplishments:

- Develop new technology ideas in regards to Intellectual Property (IP) and creation of Patents
- Develop Project Proposals and Presentations to present to executive board
- Technology Research for formation of new Business Units
- POC designs focused on Wireless Communication, Long Range Identification, and RF Energy Harvesting

SPORTVISION, Mountain View, California • 2011-2012
Innovator of sports and broadcast media products.

Embedded Software Consultant - Motorsports Division
Embedded Software Consultant for Motorsports (NASCAR) division based on OMAP 3530/Atmel AVR solution.

Selected Accomplishments:

- Developed custom in-house Linux Distribution (Kernel 2.6.35) for motorsport vehicle communication
- Enhanced communication signaling between OMAP and AVR
- Decreased system boot time and improved system stability issues.
- Custom feature development to remotely update images in flash

BROADCOM, Sunnyvale, California • 2011-2011
From acquisition of Beceem Communications. Specializing in WiMAX and LTE.

Principal Engineer – Systems Engineering
Systems Software Architecture for WiMAX and LTE software reference designs and customer platforms.

Selected Accomplishments:

- Platform Integration requirements and architecture of VoLTE into reference design (BCM21890, BCM Capri).
- Linux Platform and Network Device Driver development of WiMAX and LTE (OMAP 3530, BCM Capri).
- Development and architecture in migrating from Linux to QNX on customer platform (OMAP 4430)
- Multi-site Project management, planning, and coordination of tasks between customer and team members.

QUALCOMM, Raleigh, North Carolina • 2007-2010
Large international designer, manufacturer, and marketer of digital wireless telecommunications products/services. Customers include global ODMs/OEMs and semiconductor firms.

Staff Engineer – Computing and Consumer Product Division
Windows Mobile (6.1/6.5/7) BSP software for QSD8650/8250 SnapDragon ~1GHz ARM Cortex (ARMv7-A) architecture processors. Part of team responsible for board bring-up, BSP development, and smartbook reference software design. Collaborate with teams to assess/establish processor requirements, develop new features, and integrate BSP software from previous processor baselines.

Selected Accomplishments:
- System Performance initiatives, e.g. boot time, system load ordering, performance monitors, latency
- Board Bring-up across multiple chipset ASIC revisions, baselines, and AKUs
- Kernel and Bootloader feature enhancements
- I2C driver and slave device development (keyboard, touchpad, PMIC, sensors)
- Worked with HW teams to resolve timing defects in I2C core and develop software workarounds.
- Worked with multi-site technology teams to resolve system software and subsystem issues.

TAPROOT SYSTEMS, Morrisville, North Carolina • 2003-2007
A provider of embedded software; specializing in Telephony, Wireless LAN, and BSP software services.

Principal Software Engineer (Technical lead, Software Architect**)**
Developed Wi-Fi solutions for Symbian OS, and BSP Reference design software solutions for Windows Mobile. Facilitated business development by participating in presales activities with OEMs, reviewing SOWs, and responding to RFIs. Contributed to software development projects by collaborating with teams to define system/subsystem requirements, software architecture, and resolve certification issues.

Selected Accomplishments:
Reference Design Service Contract for Qualcomm MSM7500/7200 Processors: Based on integrated dual processor solution (ARM11, ARM9) for Windows Mobile 6/6.1 Solutions.
- Implemented/Extended GPSID for standalone and A-GPS operations; CETK GPS test harness per verification.
- Implemented SD/MMC/SDIO multiplexing host controller driver in polling FIFO and DMA INTR Mode.
- Implemented AMSS RPC SMEM control/event processing and multi-client shared memory between AP/BP.
- Resolved thread priority, stability, memory, and synchronization porting related issues.

Wi-Fi Solution (802.11 b/g): Fulfilled multiple roles in development of Wi-Fi subsystem for UIQ related projects. Core development based on Symbian OS versions 7.0-9.1.
- Architecture and Implementation of Wi-Fi subsystem for different OEM vendors and chipsets
- Implemented Control and Connection Management, Ethernet frame translation, and host driver.
- Architecture and implementation of Wi-Fi Security (802.1x) with EAP methods and Encryption (802.lli).
- Collaborated with Symbian (9.3) for Security Subsystem Key Exchange communications framework.
- Resolved certification issues with handset OEMs gaining acceptance from Wi-Fi Alliance.

PANASONIC MOBILE COMMUNICATIONS, Suwanee, Georgia • 2000-2003
An OEM of wireless handsets. North American division had roughly 250 employees.

Senior Software Engineer
Created and enhanced software subsystems to fulfill wireless carrier and QA requirements. Defined requirements and introduced new features. Eliminated defects from various software subsystems.

Selected Accomplishments:
Nokia Series 60 Symbian OS: GSM/GPRS mobile phone solution, based on OMAP 1510 AP, Infineon SGOLD BP.

- Implemented and integrated CSR H5/BCSP HCTL and BCCMD protocols.
- Implemented LDD/PDD for HDLC GSM 7.10 solution and created uses cases for AP/BP communication.
- Defined Test and Adjust Mode (TAM) component for calibration, testing, and customization.
- Populated Factory, Service Center, and Carrier Requirements into Doors.

Nucleus Plus: TDMA (IS-136) mobile phone solution based on Prairiecomm (PCI3620) w/ARM7 (no MMU).

- Implemented secure ESN bootloader and critical bank preservation.
- Implemented custom Serial Protocol for uploading and downloading melodies/bitmaps to NVM.
- Implemented NVM customization interfaces for Authentication, Security, and NAM.
- Resolved Factory and Service Center production related issues.

VERIZON WIRELESS, Plymouth Meeting, Pennsylvania • 1999-2000
Large RF wireless carrier serving clients nationwide. Specializes in wireless voice/data services.

RF Systems Performance Engineer
Ensured wireless network performance for base stations in the North Eastern region. Utilized parameter thresholds to simulate network performance. Analyzed frequency cell planning, addressed call-processing failure problems, and conducted drive tests. Resolved issues around CDMA, CDPD, and AMPS.

Selected Accomplishments:

- Initiated improvements for region performance
- Automated geographical performance reports and base station cell filters.

EDUCATION

- Bachelor of Science (BS) in Electrical Engineering - Lehigh University, Bethlehem, Pennsylvania (1999)

PATENTS

- Interference Control in Wireless Communication (Filed: 05/03/2013)

SELECTED TECHNICAL SKILLS

Applications: Adobe Creative Cloud, Libre Office, Microsoft Office
Frameworks: Foundation, Bootstrap, Jekyll
OOD Modeling: UML, OCL
Project Management: Agile Scrum (Pivotal Tracker)
Requirements Management: Doors
SCM/Tracking Applications: Git, Perforce, ClearCase, ClearQuest, SVN, PVCS, Bugzilla, PVCS
Languages: C, C++, ARM Assembler, Python, Perl, Squirrel, JSON, XML, HTML, CSS, JavaScript, VHDL
OS: Linux/Unix, QNX, Windows Mobile (6.x/7), WinCE (5/6), Nucleus Plus, Symbian, Windows (7/XP)
IDE/ICE: Eclipse, GDB, Trace32 Lauterbauch, QNX Momentics IDE, Microsoft Visual Studio, Platform Builder, ARM Development Suite, Rational Rose RT, CodeWarrior
CPUs: Cortex (ARMv7-A, A8, A9), ARM11, ARM9, ARM7, 0x86
Microprocessors: QCT (7200/7500/8650/8250), TI OMAP (1510/1610/1710/3530/4430), BCM Capri, Infineon, Prairiecomm
Wireless Peripherals: BRCM/Beceem WiMAX/LTE (BCM350, BCM21890), TI WiFi (TINet1100B), Marvell WiFi (88W8381/85), Phillips WiFi (BGW211), CSR Bluecore (Casira), Qualcomm GPSOne
Open Development Platforms: Gumstix, Beagleboard/BeagleBone, Electric Imp
Electronic Simulation Design Tools: Agilent ADS