

Matthew S. (Steve) Mobley
3436 Roanoke Road
LaGrange, GA 30240
Home: 706-882-7050 / Mobile: 706-333-0643
steve@stevemobley.com / <http://www.stevemobley.com>

Skills & Responsibilities

- R & D Leader / Chief Architect (VP R&D)
 - Hardware
 - Software (OOD)
 - Project Management and Scheduling
 - Mentoring and Training
 - RAD (XP, Scrum)
- Software Engineering
 - Windows (VC/C++, VB, C#, .Net)
 - DSP Systems and algorithms
 - Embedded Systems and RTOS
 - Web / Network / Sockets
 - Client / Server / Database
 - Device drivers (Win32, Linux, proprietary)
- Hardware Engineering
 - Digital
 - Analog
 - Optics
- Telecommunications Engineering
 - CTI
 - Voice, Data, Video
 - Network and Switching
 - Voice over multiple network protocols
- Radio Communications Engineering
 - HF, VHF, UHF
 - Voice and Data
 - Antennas and Transmission Lines

Languages

- Assembler
- C/C++
- Embedded C/C++
- Visual C/C++
- Pascal
- Basic
- Visual Basic
- Java
- Javascript (and JScript)
- Delphi
- SQL
- HTML / XML / XSL / Soap
- ASP / IIS
- VBA (within MS Office Applications)
- WSH
- .Net (C#, VB, ASP)

Operating Systems

- DOS
- Embedded DOS
- Windows
- Win CE
- Linux
- Embedded Linux
- LynxOS
- ThreadX
- uC/OS-II

Processors

- 6502
- 6809
- 68HC05
- 68HC08
- 68HC11
- 8051
- 8080/8085
- Z80
- 80x86
- 68K
- DSP56K
- TMS32C320 DSP
- Motorola Coldfire
- Arm
- Analog Devices Sharc
- NEC V850
- TI OMAP

Misc

- Embedded file systems
- Embedded GUI
- Flash loaders
- Embedded Networking
- IDE
- CAN
- I2C
- SPI
- I2S
- USB

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Experience

Independent Consultant / Contractor

1977 – Present

LaGrange, GA

- Prison Kiosk System
 - Inmate commissary order entry system
 - Offline transfer of product, price, and order information to/from main system
 - Security and operation suitable for hostile prison environment
- Pipe Organ controller
 - Ported RTOS to Coldfire processor
 - Proprietary fiber communications protocol
- E911 Event Logging System
 - Call center monitoring and reporting software
 - SQL Database design and interface
 - Crystal Reports design and integration
- Embedded Arm 9 system
 - JPEG image processing in C/C++
- Windows and Web based prison inmate account and commissary management system
 - Database system for managing inmate money accounts
 - Database system for managing product inventory and ordering system
 - Crystal Reports design and integration
 - System for automatically transmitting orders over the internet using XML
 - System for automatically updating software and databases over the internet
- Windows NT Wolfpack SCSI disk driver (clusdisk.sys)
 - Modified the device driver for Microsoft to allow shared access to the boot drive of a Wolfpack cluster system. This device driver is currently distributed with Windows NT/2000 Server
- User interface program for gang EPROM micro controller programmer
- Windows NT device driver for PC Watchdog Board
- Windows NT device driver for OPTO I/O board
- Windows NT device driver for relay output board
- Bios for ROM floppy drive emulator
- Automated full duplex radio repeater system with telephone interconnect

nfuzion, LLC

2004 – Present

Grand Terrace, CA

- Establish and manage remote engineering office
- Rear seat entertainment system incorporating satellite A/V and stored A/V on TI-OMAP
 - Software project management
 - Overall software architecture design
 - Application framework design for use with or without OS
 - Embedded Linux BSP for custom hardware
 - System drivers for I2C, I2S, SPI, UART, IDE, DMA
- Multiple SDARS satellite systems
 - Audio data transfer
 - Information data (Weather, Sports, Stocks, etc.)
 - User interface design and implementation
 - Framework design and implementation
- Industrial Chlorine generator
- Remote telemetry system using PPP/TCP/IP

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Interact Public Safety
LaGrange, GA

2002

- Temporary leave of absence from Panasonic to establish remote engineering office and team
- Director of Software Engineering
 - Established remote development office
 - Led five-man remote team in the conversion of E911 software from Cobol to Visual Basic
 - Converted E911 system databases from ISAM to SQL

Panasonic – MCUSA
Peachtree City, GA

2001 – 2004

- Chief Software Architect
 - Designed and lead development of new architecture for major automotive OEM and for use in future automotive entertainment products.
 - Introduced and trained team in object oriented design and development using EC++
 - Produced a scalable architecture and framework implementation that allowed for use with or without an RTOS
- Lead Software Engineer
 - Embedded systems using various RTOSs, Linux, ASM, C/C++
 - Analog Devices SHARC DSP system
 - IDBC committee member. Assisted in definition of multi-vendor vehicle standard lan / audio bus
- Chief Architect for Panasonic's OEM automotive Driver Information System
 - Overall software and system design of car navigation and information system
 - Server side of information system for pushing content to vehicle
 - Embedded systems using various RTOSs, Linux, ASM, C/C++
 - Web site design using IIS and ASP for consumer survey of desired features

Baker Audio Inc. / Baker Integrated Technologies, LLC
Norcross, GA

1994 – 2001

Vice President of Engineering, Partner (chief developer / architect) **1998 – 2000**
Senior Software Development Engineer **1994 – 1998**

- Led and managed remote research and development office located in LaGrange, GA
- American Airlines call center and crew scheduling system
 - Overall system design
 - Interfaced to existing IVR system and Oracle database
- Windows NT-based integrated telephone and radio communications / dispatch system
 - Overall system design and specification
 - OEM and proprietary hardware and software integration
 - Device drivers for proprietary DSP and interface boards
 - Digital audio bus management software
 - DSP Software for proprietary boards using ASM and C/C++
 - TCP/IP (socket) interface for distributed resources
 - Proprietary network protocol for redundant system
 - COM API for remote operation
 - Automatic fail over system preventing dropped or lost calls (patented)
- LAN based paging system (audio over network, current system in Atlanta Airport and others)
 - DSP system software and algorithms using ASM and C/C++
 - PC API software for proprietary DSP boards
 - Dedicated audio accessories using embedded processors, RTOS, ASM and C/C++
 - Windows program for cataloging and editing of prerecorded messages

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Durand – Wayland Inc. **1988 – 1994**
LaGrange, GA

System Engineer

- System for sorting fruit by color, weight, dimension, and density at up to 12,800 pieces per minute
 - Overall system design
 - Multi-lingual implementation of user interface
 - Graphics sub-system for displaying color images
 - Embedded system for fruit tracking and conveyor control using embedded C/C++ and ASM
- System for grading fruit based on visible defects at 750 feet a minute
 - Designed mechanical system for lighting and viewing all surfaces of fruit
 - Designed and specified hardware for video capture and processing
 - DSP software for video capture and defect analysis using C and ASM
 - PC software for user interface and conveyor control

Computer Communications Specialists **1985 – 1988**
Norcross, GA

Design Engineer

- Multi-line voice/data system for PC
 - Board level software for telephone interconnection (voice, data and signaling)
 - TSR API software for IBM PC
 - Script engine and compiler for line control
- Time and Attendance system
 - Hardware design (time clock)
 - Two stage battery backup power design
 - System software
 - Virtual machine compiler, interpreter, and simulator for application software

Durand – Wayland Inc. **1982 – 1985**
LaGrange, GA

System Engineer

- Dimensional fruit sizing system
 - Video system hardware design
 - Embedded software (non-DSP) for video processing
- Weight based fruit sizing system
 - Ported user interface to PC
 - Interface for distributed resources
- Color fruit sorting system
 - Design and implement of multicolor sorting algorithms
 - Interface distributed resources to central controller

Miliken and Company **1980 – 1982**
LaGrange, GA

Instrumentation Specialist

- Production Monitoring System
 - Hardware interface to production machinery
 - Software for downtime analysis

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Community Activities

Concord Baptist Church
LaGrange, GA

Music Director 1993 – 2002
Deacon Chairman 1990 – 1992
Youth Director 1986 – 1992

Elm City Lodge No. 544 F&AM
LaGrange, GA

1987 - Present

Sonrise Baptist Church
LaGrange, GA

Music Director 2004 – Present
Deacon 2004 – Present

West Point Chapter R.A.M No. 089
West Point, GA

1989 - Present

Licenses / Certificates / Professional Memberships

- Advance Class Amateur Radio License
- General (2nd) Class Radio Telephone
- Member Microsoft Developer Network
- Member Intuit Developer Network

Education

Southern Technical Institute
Marietta, GA

- Drafted before completing BSEE.

1971 – 1972

Georgia Army National Guard
LaGrange, GA

- Various military schools in communications
- Various military schools in combat engineering
- Various military schools in leadership (NCO)

1972 – 1982