

**Matthew S. (Steve) Mobley**  
**3436 Roanoke Road**  
**LaGrange, GA 30240**  
**Home: 706-882-7050 / Mobile: 706-333-0643**  
[steve@stevemobley.com](mailto: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)
- Bash shell
- SQL
- HTML / XML / XSL / Soap
- PHP
- Python
- ASP / IIS
- VBA (within MS Office Applications)
- WSH
- .Net (C#, VB, ASP)
- Action Script (AS3)

## **Operating Systems**

- DOS
- Embedded DOS
- Windows 16/32/64
- Win CE
- Linux
- Embedded Linux
- LynxOS
- QNX
- ThreadX
- uC/OS-II

## **Processors**

- 6502
- 6809
- 68HC05
- 68HC08
- 68HC11
- 8051
- 8080/8085
- Z80
- 80x86
- 68K
- DSP56K
- TMS32C320 DSP
- Analog Devices Sharc, Blackfin, SigmaDSP
- Freescale Coldfire, iMX6, Kinetis
- Arm / M3 / M4
- NEC V850
- Atmel AVR
- TI OMAP, Jacinto 5 & 6

## **Misc**

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

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

## **Experience**

### **Independent Consultant / Contractor**

**1977 – Present**

#### ***LaGrange, GA***

- Pipe Organ Simulator
  - ADI DSP for audio processing
  - Secondary coding of Kinetis controller
  - Audio qualification
- 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
  - Web application for remote access to installed systems
  - Coprocessor implementation for large scale systems
- 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 Server
- User interface program for gang EPROM micro controller programmer
- Windows device driver for PC Watchdog Board
- Windows device driver for OPTO I/O board
- Windows device driver for relay output board
- Bios for ROM floppy drive emulator
- Automated full duplex radio repeater system with telephone interconnect

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

**Nfuzion Consulting, Inc.**  
**LaGrange, GA**

**2004 – Present**

- Establish and manage remote engineering office
- TI Jacinto 5 Infotainment platform
  - Port QNX to custom hardware
  - System installation and setup packages
  - Integration of peripheral device
    - NOR flash
    - NAND flash
    - eMMC
    - SD
    - Network interfaces
    - Graphics and Video Display (LVDS)
- TI Jacinto 6 Infotainment platform
  - Port QNX to custom hardware
  - System installation and setup packages
  - Integration of peripheral device
    - NOR flash
    - NAND flash
    - eMMC
    - SD
    - Network interfaces
    - Graphics and Video Display (HDMI)
    - M4 integration using TI IPC
- Freescale iMX6
  - Linux BSP (LTIB)
  - AVB hardware integration
  - Graphics and Video Display
  - System installation and setup packages
- QNX BSP, lower and middle tier for next generation automotive infotainment system.
- Middle tier for MY 2013 vehicle entertainment system including XM, Navigation, Media players.
- Middle tier database support for in car navigation system.
- RF Remote power meter reading system using mesh networks.
- 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

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

**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

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

**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

**Matthew S. (Steve) Mobley**  
3436 Roanoke Road  
LaGrange, GA 30240  
706-882-7050  
[steve@stevemobley.com](mailto:steve@stevemobley.com)  
<http://www.stevemobley.com>  
<http://smobley.home.mindspring.com>

**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 – 2011  
Deacon 2004 – 2011

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

1989 - Present

**Licenses / Certificates / Professional Memberships**

- Advance Class Amateur Radio License
- General (2<sup>nd</sup>) 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