

LELAND D. HAMILTON

Sr. Systems Analyst

Sr. Software Engineer

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Experienced Sr./Principal **Software Engineer** and **Systems Analyst** in various applications, especially **embedded real-time** systems and **device drivers** and **board support** including **x86, Power PC**, and a number of other platforms using a variety of languages, primarily **C, C++, ADA**, and **assembly**. Performed full **software life cycle**, including **requirements analysis, system design**, detailed **software design, development, unit testing, integration testing**, hardware and software **trouble-shooting** using various **debuggers, ICEs, logic and protocol analyzers**, other **HW/SW tools**, various **real-time operating systems, Linux, UNIX, UML, version control systems** and **IDEs**. Commercial and Military standards, such as **DO-178B**. Filled the "holes" in many projects. Talent for **solving** complex design and **troubleshooting** problems, including several that had plagued others for over a year. **Productivity enhancements** earned me the name "**Utility Man**". Avid reader and self-learner.

Sr. Firmware Engineer Integrated Medical Devices, Liverpool NY 2013
Firmware specialist for medical heart monitoring devices, porting to TI TMS320C5505 embedded platform and incorporating replacements for obsolete devices.

Sr. Systems Analyst Lockheed Martin MS2 , Owego NY (Global Contract Professionals contract) 2012
Designed and implemented unit test software for embedded VxWorks multifunction processor board support package to qualify for Software Safety RTCA DO-178B Level C 100% statement coverage. Created low level requirements and traceability to high level requirements and design using FAA DER approved criteria.

Sr. Systems Analyst Linkabit division of L3, Victor NY (Aerotek Contract) 2010
Designed, implemented and tested voice and data radio upgrade to use Ethernet data instead of specialized data adapter, including system and application changes and new software to support "alternate" Ethernet data stream using an existing complex Data API with limited documentation and uncommented code. Started to implement some optimizations to reduce data fragmentation.

Sr. Systems Analyst ENSCO, Inc, Endicott NY 2004-2008

- Apply customer change requests to existing **real-time embedded** aircraft Flap Control Unit. Used **logic analyzer** for timing analysis. Troubleshooting with **in-circuit emulators**. Developed tests for **Hardware Software Interface (HSI)**. **Peer reviews**.
- Developed a **MIL-STD Secure Erase** for a **Solid State Drive** in a **Linux embedded** system.
- Implementation of a **J-Message MIL-STD-6016C** message routing system.
- Develop unit tests for **Joint Strike Fighter (JSF) Full Authority Digital Electronic Control (FADEC)** embedded real-time systems. Peer reviews
- Formal Unit testing to **DO-178B SEAL 1** for **JSF Multi-Function Display** embedded software using LDRA. Requirements analysis and decomposition for testing requirements, including **Black Box, White Box**, and **assembly language testing**.
- Real-time embedded Flash and FPGA download to embedded hardware through multiple network layers of Ethernet RPC & NFS, **DeviceNET**, and **CANBus** on Windows PC, **PowerPC, VxWorks** with **Tornado**, and **TI DSP TMS320**.
- Real-time embedded software design, development, implementation, testing and troubleshooting of environmental testing diagnostics for new **Space Shuttle** display interface computer. **Solved** software timing related bugs that had been causing problems for over a year. **PowerPC, VxWorks**

EXPERIENCE SUMMARY**SYSTEMS**

- **Real-time** operating systems including **Integrity, TargetOS, VxWorks, pSOS**, and other **RTOSes**
- **PowerPC**
- **Intel x86 with RTOS, Windows 7, Vista, XP, etc.** and **standalone** (no O/S)
- **Linux, UNIX**
- **TI TMS320 DSP**
- **Motorola 68K**, including **68020/6888x, 68070, 68040**

LANGUAGES

- **C, C++, ADA, and FORTRAN** languages
- **Assembly languages** for **INTEL x86, Power PC, Motorola 68K**. Previous experience with about two dozen **assembly languages**.
- Previous experience with many **higher-order languages** including **SAS, PL/M, PL1, SNOBOL, COBOL**

UTILITIES & STANDARDS

- **real-time debuggers** & in-circuit-emulators, Integrated Development Environments (IDEs) such as **GNU tools, Eclipse CDT, Tornado, Visual C++, Code Composer Studio**. **PC utilities** including **MS Office Word, Excel, Access**. **MKS Integrity, Code Collaborator, CVS, WINCVS, Subversion, Razor, SYNERGY, PVCS, Rational Clearcase, LDRA**, and a long list of editors and other **utilities**
- **Linux and UNIX utilities and shells (C, Bourne, etc.), CVS, GNU tools**
- **DOORS, Rational Rose, UML, Cadre, SUPERCASE**, and other software development tools
- **RTCA DO-178B, SEAL 1, MIL-STD 2167A**, and other software development standards

EDUCATION

- Erie Community College AAS Data Processing
- Purdue University 2 years of Electrical Engineering studies with concentration in Computer Sciences
- Continuing education: training and self-study including **C/C++, OOD, UML, UNIX, Software Configuration Management, and ADA**. Self-education for many languages and utilities. Some company sponsored in-house training.
- Avid manual reader

Additional information available at www.lelandhamilton.com