

# GLENN A. NEIDERMEIER

## OBJECTIVE

Career advancement in engineering of electronic equipment or control systems for industry, automotive, or consumer products.

## SUMMARY

Nearly twenty years experience working in various technical capacities, with the last ten focused on software development of embedded systems.

## EDUCATION

Indiana State University - **Bachelor of Science in Electronic Technology**

## PROFESSIONAL EXPERIENCE

### **LHP Software, Software Controls Engineer (2003 – present)**

#### **Commercial Vehicle Emissions – EMCON Technologies (30 months)**

Created new software features for diesel engine thermal regenerator after-treatment system ECU. Created written software design requirements documentation and formalized the revision control system. Added new features to software data tool interface. Designed and implemented diagnostic trouble code (DM1) reporting component to J1939 communication interface while meeting constraints of memory and program space on embedded microcontroller. Integrated J1587 and Volvo proprietary protocols for software load into existing ECU bootloader. Responsible for software release to Volvo US07 waste truck program and supporting customer problem reports from the field. Provided support for migration of existing hand-code software into Simulink models for Volvo US10 program.

#### **DCX/Midrange Software Controls - Cummins Inc. (12 months)**

Created new software features for diesel engine control module from written requirements specifications and Simulink diagrams. Created software for fixed point integer arithmetic and real-time operation on 32-bit microcontroller. Used PERL and SQL to identify and correct inconsistencies in data dictionary entries for software parameters. Met project schedules for software integration while diligently adhering to established PRCR process and configuration management system.

#### **Fleetguard Emissions Solutions – Cummins Inc. (4 months)**

Implemented and tested over 900 lines of new C code for diesel engine after-treatment control system. Meeting a four-month delivery schedule required extensive coordination with other engineers to analyze, comprehend, and refine the system requirements. Final delivery included functional software verified by thorough unit-testing against the Simulink model specifications.

#### **Light Duty Automotive – Cummins Inc. (6 months)**

Developed software interface for engine control module which drives the vendor-supplied HPCR fuel injection system over the CAN bus. Developed message simulator in Canalyzer script for early software development and unit testing of communication interface. Assisted in development of a data acquisition system to evaluate and troubleshoot pulse signal to fuel injector.

#### **Core II Development – Cummins Inc. (4 months)**

Implementation of library palette in Simulink for diesel engine electronic control module. Responsible for PRCR resolution and testing of embedded software.

### **ANALYSTS INTERNATIONAL, Programmer/Consultant (2002 – 2003)**

#### **Data Collection Appliance – Lexmark International Inc., Managed Print Services (12 months)**

Created custom Linux installation and automated configuration scripts for deployment of standalone data-collection appliance at a Managed Print Services customer location. Created a modular software

architecture and component interface specification for data collection software, which allowed a second developer to contribute more effectively to the project while working independently. Created integration guidelines for IT and assisted with internal Lexmark roll-out and field test.

### **LOGIKOS, INC, Senior Software Engineer (1999 – 2002)**

#### **Embedded Graphics Library – Caterpillar Inc. (4 months)**

Developed Epson 1353 LCD device driver for 32-bit electronic control module. Maintained progress without prototype hardware by adapting library and unit-test drivers to VGA display. Created functional specification and test plan. Performed profiling analysis and optimization of code to meet performance requirements for real-time operating system.

#### **Electronic Control Unit Test Application – Caterpillar Inc. (2 months)**

Created flash memory test driver for end of line test on 32-bit diesel engine controller board.

#### **Universal Printer Driver – Lexmark International Inc. (6 months)**

Implemented GNU/Linux inkjet printer drivers for Lexmark 2002 consumer product line. Provided assessment of scope and estimation of time for project. Created extensions to NPA communication protocol which provided more flexible application interface for reading ink-levels from printer. Used UML modeling tool to specify software architecture definition, and worked with other software teams to integrate components. Created system tests based on analysis of software requirements.

#### **PowerSpec Engine Access Tool –Cummins Inc. (15 months)**

Developed and maintained Windows application that performs calibration adjustments on a diesel engine electronic control unit over the PC serial port. Revised software architecture to facilitate reuse of DLL from a similar software application. Worked with marketing team and end users to perform requirements capture of new features. Investigated and addressed problem reports from field tests. Responsible for software release and configuration management in PVCS Tracker.

#### **Palm to Windows CE Contacts Exchange – Logikos Prototype (2 months)**

Designed software for Windows CE to capture contacts from Palm OS devices over infrared connection. Removed technological hurdles from project by discovering COM interface to proprietary Windows CE IR communication stack.

### **BEAM, LONGEST & NEFF, LLC**

#### **Geographic Information Systems Specialist 1998 – 1999 (18 months)**

Provided GIS application development, consulting, and project management for several municipal government clients. Provided tools and training to help reduce dependency of client staff on consulting services. Technical contributions included development of various data exchange utilities using C language and UNIX shell. Developed land ownership database application for client using Visual Basic and SQL. Performed system administration of HP/UX based networks in fulfillment of support and consulting contracts.

### **SONY DIGITAL AUDIO DISC CORPORATION**

#### **Production Maintenance Technician 1996 – 1998**

Performed preventative maintenance of robotic, pneumatic, hydraulic and vacuum systems in optical disc manufacturing. Ability to diagnose electronic controls such as Sharp PLC helped to hasten troubleshooting of broken or badly calibrated equipment. Maximized uptime by working to quickly repair malfunctioning equipment on the factory floor. Used SPC, shop floor data collection, and rigorous QA inspection to proactively detect and eliminate machine malfunctions affecting yield.

#### **Injection Molding Operator 1989 – 1996**

Participated in transition of Laser Videodisc production from Sony Japan R&D to DADC facility. Contributions to data collection procedures on the shop floor improved production flow, yield, and defect tracking in Laser Disc replication.