

# Stephen T. Karg

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## LANGUAGES / PROCESSES / EDUCATION

•I am fluent in C/C++. I programmed in the following languages as well: Perl, PL/M, PASCAL, FORTRAN, ACCOL, COBOL, BASIC, and Assembly (PIC-Microchip, 80x86, Z-80).

•I developed systems using Real Time Operating Systems (RTOS), using iRMX, [RTTarget/RTKernel](#), Win32, and uCOS. I developed graphical interfaces using Menuet and MetaWindow or [Simple Directmedia Layer](#). I developed embedded systems with and without RTOS on PC based hardware and on microcontrollers.

•I created an open-source [embedded BACnet stack](#). I contributed significant patches to the [WireShark](#) project to support BACnet protocol analysis.

•I completed the following short courses to continue my education:

- Technical Writing Seminar
- [Introduction to Capability Maturity Model \(CMM\)](#)
- [Networking DDC Systems Using BACnet](#)
- [How to Develop Better Firmware Faster](#)
- [Zenger Miller's FrontLine Leadership](#)
- More Than A Gut Feeling II - Selection Interviewing Skills
- [Embedded GNU Jumpstart](#)

•I used the following processes for software development: [Extreme Programming](#), [Personal Software Process](#), Structured Design (Functional Decomposition), Object Oriented Design.

•I installed, configured, and maintain multiple Linux servers for my home network and for test labs at work. I use a Linux workstation.

•I attended [The University of Phoenix](#), Denver Tech Center Campus, Englewood, Colorado, and attained an Master of Science in Computer Information Systems in 1996.

•I attended [Geneva College](#), Beaver Falls, Pennsylvania and attained a Bachelor of Science in Electrical Engineering in 1988. I minored in Computer Science. I received Research Honors.

•I participated in the following conferences:

- [Software Engineering Process Group \(SEPG\) Conference](#)
- [The Embedded Systems Conference](#)
- [XP Universe](#)

•I develop and maintain websites for:

- [Cub Scout Pack 410](#)
- [Anencephaly Net](#)
- [Kargs.net](#) and [Karg.us](#)
- [GeorgiaFaces.info](#)
- [BouncesByBob.com](#)

## EMPLOYMENT HISTORY

[Lithonia Lighting](#) - Conyers, Georgia (7/97 to present)

**Software Development Engineer** developing embedded systems for Lighting Control Systems.

- Use [Extreme Programming](#) and [Personal Software Process](#) key practices to develop high quality software.
- Active [BACnet](#) standing standards project committee member, participating in several working groups, including [Testing \(BTL\)](#) and [Lighting Applications](#) (convener). Participate in U.S. Department of Energy workshops relating to lighting controls.
- Participate in the project planning and estimating, analysis, design, coding, and testing of embedded system products for lighting controls.
- Developed and maintain a lighting controller product line called [Synergy](#). It consists of an embedded PC controller which communicates to distributed microcontroller based control modules. It is networked using [BACnet](#).
- Investigate cutting edge technology for new product development.
- Mentor associates in software engineering

[Alabama Silicon, Inc.](#) - Bessemer, Alabama (5/89 to 1/92)

**Plant Engineer** involved with the renovation and re-design of an electric arc furnace facility. Created a modern, flexible, and efficient manufacturing facility.

- Selected, configured, and programmed the [Bristol Babcock DPC 3330](#) for furnace control, water spray cooling, temperature and flue gas monitoring, data acquisition, strip chart recording, load cell weighing, and various power monitoring related calculations.
- Designed and created electronic circuitry and systems for the control and monitoring of the furnace facility.

I am a member of The Institute of Electrical and Electronics Engineers, Inc. ([IEEE](#)).

I am a member of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers ([ASHRAE](#))

[ABB Daimler Benz Transportation \(NA\), Inc.](#)

Pittsburgh, Pennsylvania (7/92 to 7/97)

**Engineer** involved with hardware and software engineering of Automated Ground Transportation Systems.

- Involved in Software Engineering Process Group (SEPG) activities. Reviewed and updated process documentation. Studied ISO 9001, ISO 9000-3, TickIT, and [SEI's CMM](#) and [PSP](#).
- Participated in the project planning and estimating, analysis, design, coding, and testing of the Frankfurt Airport, [Denver International Airport](#), [Atlanta Hartsfield International Airport](#), and Miami Downtown People Mover (DPM) SCADA / traffic management realtime multi-tasking products.
- Performed start up, testing activities, hardware/software maintenance, and training for the Miami DPM extension and Denver International Airport (DIA) project's people mover vehicle product.
- Coordinated, scheduled, and tested all facets of the project (to include developing the test documents and getting the tests approved) while interacting with the customer (City and County of Denver) and the consultant (Lea + Elliott) as the Site Test Coordinator for the DIA project. Edited, wrote and revised the Software Module Requirements Specifications, Pseudo code listings, Diagnostic Monitor User's Guide, and Installation Testing Specification procedures for the Denver International Airport AGTS. Designed and developed a technician friendly user's guide for the vehicle automatic train control computer for the Miami DPM and DIA projects.

[Carbo-Sil, Inc.](#) - Niagara Falls, New York (8/88 to 3/89)

**Plant Manager and Electrical Engineer** involved in production, eliminating bottlenecks, and maintenance of an automated block production facility. Increased production from 0 to 50 tons/day to 80-100 tons/day. Wrote inventory management programs using dBase.