

# Stephen T. Karg

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## LANGUAGES / PROCESSES / EDUCATION

- I am fluent in C for embedded systems and console applications.
- I developed systems using Real Time Operating Systems (RTOS), using iRMX, RTTarget/RTKernel, Win32, and uCOS. I developed embedded systems with and without RTOS on PC based hardware and on ARM, AVR, and PIC microcontrollers.
- I'm a BACnet committee member, participating in several working groups, including Lighting Applications (convener), MS/TP, and Testing (BTL). I created an open-source embedded BACnet stack library with unit tests, and ported it to numerous microcontrollers and operating systems. 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](#)
  - [Wireshark Sharkfest '08](#) (core developer)
  - [Green Sustainable Building Controls Conference](#) (speaker)
  - [BACnet Plugfest](#)

## EMPLOYMENT HISTORY

[Karg Service Company](#) - Birmingham, Alabama (1/12-present)  
**Engineer** developing embedded systems and BACnet products.

[The Watt Stopper](#) - Birmingham, Alabama (5/07-present)  
**Senior Engineer** developing embedded software and hardware for Lighting Control Systems.

- Developed the room controller, network bridge, and lighting panel products for [Digital Lighting Management](#). It consists of distributed microcontrollers based control modules. It is networked using [BACnet](#).
- Investigate cutting edge technology for new product development.

[Lithonia Lighting](#) - Conyers, Georgia (7/97 to 5/07)  
**Software Development Engineer** developed embedded software for Lighting Control Systems.

- Developed and maintained a lighting controller product line called [Synergy](#). It consisted of an embedded PC controller which communicates to distributed microcontroller based control modules. It is networked using [BACnet](#).
- Participated in U.S. Department of Energy workshops relating to lighting controls.
- Participated in the project planning and estimating, analysis, design, coding, and testing of embedded system products for lighting controls.
- Investigated cutting edge technology for new product development.
- Mentored associates in software engineering

[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.

[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.

[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.

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](#))