

## *John E. Werner*

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KC2TNO

### *Doing the Impossible, or at Least Highly Improbable...*

John Werner is an internationally published author, engineer, and conference speaker who brings over 20 years of experience “doing the impossible” while solving technical problems with creative solutions.

As a Senior Software Engineer, John has used his unique problem solving abilities to become an expert in solving problems that have escaped others.

As an author and editor, John has written a regular column for an automotive magazine and has been published both in the US and Europe. In his spare time, he created and maintained the Internet's Oldest FAQ on Snow Tires and Winter Driving.

As an inventor and architect, John has earned patents for inventions ranging from Inkjet Printers to Automotive Ignition Systems; and he has both published and presented his software architecture work.

As a software process evangelist, John has motivated corporate cultures to embrace sound development practices such as Test Driven Development, Continuous Integration, Unit Testing, and Continuous Code Review while seeking to provide a careful balance between process and productivity.

The world of Embedded Software Security has not escaped his focus. His work in driving the security analysis of embedded products; developing an innovative, risk-based approach to Threat Modeling; and creating a cross-platform tool for analyzing, organizing, and reporting the results was lauded by corporate research.

International work has been a part of John's career for the past decade. During that time, John has gained experience working both for and with offshore development efforts and serving both in the roles of team player and team leader. He has traveled extensively to Munich, Germany, and Milan, Italy; and has also worked in Bangalore, India, and Stuttgart, Germany.

## **Professional Highlights**

### **Kelly Services**

**5/2010 – present**

*OCG Contract at Ortho Clinical Diagnostics (5/2010 – present)*

- Mentor and train developers in new tools, technologies & methodologies
- SW Integration Team Lead
  - Develop Configuration, Build, Unit Test, Code Review and Release Management Plans & Procedures
  - Implement Continuous Integration System (Jenkins CI)
    - Build (MSBuild), Unit Testing (NUnit), Code Coverage (NCover)

- Supervise Integration Testing plans, procedures, and resources
- Institute Peer and Formal Code Reviews using a distributed Code Review Tool (Crucible)
- Develop purpose built tools
- Interprocess and Inter-board communications using D-Bus on Windows, Linux, and QNX
- C# .NET and C++ (C++11) development for Windows, QNX, and Linux based Medical Devices
- Refactor Design, Develop SW Platform
  - Integrate Qt SQL, XML, Core and GUI components
- SQL Database development

### **FOSS & Other Development Projects**

**2012 – present**

- Cross Platform Qt Development
  - Android, Linux, Windows
- Android App Development (Java) for VOIP application
- VOIP / Asterisk
- REST interface development in PHP

### **Professional Development Program**

**Q1/2010**

*C# (courses through Skillssoft)*

- C# 2005: Threading, Service processing and Applications Design
- C# 2005: System Types & Collections
- C# 2005: Custom Programming
- C# 2005: Security
- C# 2005: Diagnostics & Management

*Other Programs & Activities*

- Open Street Map – Volunteer Mapper
- Susquehannock Trail Performance Rally (STPR) – Assistant Chief of Specialty
- SBA SCORE Workshop
- Career Navigator

### **Bosch Security Systems (formerly Detection Systems)**

**1999 – 2009**

*Systems Engineer*

(2007 – 2009)

- Selected to Start SW Systems Discipline at Bosch Security Systems
  - Worked cross-organizationally to identify and develop strategic and tactical common vision
- Specification of multi-platform Network Architecture
  - Directed work with Bosch Research and Technology Center, Pittsburgh (RTC) to specify and develop engineering ready middleware solution
- Performed Threat Modeling and authored Guidelines for Software Security of Security Systems
  - Developed cross platform (Linux/Windows) Risk-based Threat Modeling Tool using Qt, C++, XML, XQuery
  - Collaborated with RTC Pittsburgh both for initial phases and for peer reviews

*Fire and Intrusion Alarm Control Panel SW Architect & Engineer*

(1999 – 2007)

- Oversaw Architecture and design of software team
  - Overall architecture of software for next generation security/access/fire panel
  - Presented paper on this work at Bosch Conference on Software Engineering
  - Employed Object Oriented Analysis and Design (OOA / OOD / UML)
- Managed off-shore and on-shore resources
  - Evaluated potential contract and full time resources
  - Managed design and delivery of components from off-shore vendors (India, Germany)
- Specified & Evaluated Off the Shelf Components & Tools
  - GUI toolkit, OS, Embedded ODBC & SQL Database, Compiler / IDE, Revision Control, Bug Tracking
- Developed and Implemented Functional Requirements, Software Requirements Specifications, and Subsystem Designs for Intrusion and Fire Alarm Control Panels.
  - Programmed in Assembler, C, C++, SQL, XML
- Responsible for Configuration Management
  - Developed and Refined Change Control and Defect Tracking Processes
  - Supervised Build & Release Management
  - Performed Requirements Management and Ensured Traceability (CMM)
- Developed Custom Debug tools to track problems not otherwise observable
  - Synthesized tools by combining existing tools with custom Linux Shell Scripts
  - Researched and ported tools to custom hardware

**Xerox Corporation, Webster, NY**

**1991 – 1998**

*Sr Project Engineer – SW & Electronics Design for Research Test Fixtures*

- Worked closely to implement proposed solutions for ink jet researchers
- Managed integration, delivery, and testing of C and C++ SW for PC-based control fixtures
- Performed system analysis, architecture, design, and implementation using Booch Object Oriented methodologies.
- Established SW development environment using Sun UNIX servers and X-Windows on PCs.
- Team Leader of Ink Jet Business Unit (formerly Advanced Imaging BU) Computing Team.
  - Facilitated communication between corporate IM and end users.
  - Formulated, tested, and advised on SW development environment and tool sets for UNIX and Windows NT.
  - Enabled migration from Xerox proprietary workstations to PC environment (Microsoft Mail & Office)

**Noeth Honsinger Associates, East Rochester, NY**

**1989 – 1990**

*Field Applications Engineer*

- Technical support and sales for electronics Sales Rep.

## Education & Achievements

### Professional Training

- Six Sigma, Design for Six Sigma (DFSS), Voice of the Customer (VOC)
- Xerox PDP, Bosch PDP
- Capability Maturity Model (CMM)
- Embedded Systems Conference

### University of Rochester, Rochester, NY

1985 – 1989

- BSEE with Distinction (5/89). Concentration in computer electronics.
- SAE Mini-Baja (9/86 – 5/89)

### US Patents

1996 – 1999

- 5,529,046 High voltage ignition control apparatus for an internal combustion engine
- 5,898,393 Data translating memory system
- 5,971,523 Liquid ink printer having multiple processors for fast color imaging

## Outside Leadership

### Scouting

- Girl Scout Service Unit Cookie Manager (2005 – 2010)
- Cub Scout Pack Committee Chairman, Cub Master (2007 – 2008)
- JOTA Staff (2010 – present)
- Troop Committee Member (2014 – present)

### Production Coordinator (NewSong Church of Greater Rochester)

(2001 – 2010)

- Responsible for designing and overseeing systems for weekly service in rented building.

### Motorsports

- Susquehannock Trail Performance Rally (STPR) (2010 – present)
  - Organizing Committee Member, Safety Sweep Captain

## Other Interests & Activities

### Amateur Radio

- General Class License (KC2TNO)

### Outdoor & Motor Sports

- Instructor for TireRack Street Survival Schools (teen driving program) (2007 – present)
- GPS, Mapping (<http://readgpl.sourceforge.net>, Open Street Map) (1997 – present)
- Rally, AutoX, Flagging & Communication (1992 – present)

## Writing

- Editor of The Snow Tire FAQ (<http://www.snowtire.info>) (1993 – present)
- Competition Editor for Volvo Club of America's *Rolling* magazine (1997 – 2006)
- Contributing Editor for the University of Rochester Computer Magazine (1988 – 1989)

## **Skills List**

### Proficient

- Programming Languages
  - Qt (QMake, Qt-Creator)
  - C++ (11) / C / C# (.NET)
  - Java
  - SQL
  - Assembler
  - Unix / Linux Shell Script (Bash, Ash, KSH)
  - Perl
  - Lisp
  - Makefile
  - XML
- SW Security
  - Security Analysis
  - Threat Modeling
  - Threat Trees
- Development Tools
  - Subversion (SVN), CVS, Mercurial
  - MKS Integrity Suite (2005, 2007)
    - Source Integrity
  - Integrity Manager
  - Jenkins / Hudson CI
  - Visual Studio (2010, 2008, 6)
  - NUnit & NCover
  - Crucible & FishEye
  - JIRA
  - (X)Emacs
  - Eclipse (QNX Momentics, Android SDK)
  - Visio
  - Doxygen
  - Klocwork
- Operating Systems (Development for)
  - Android
  - Windows NT, 98, 2000, XP, Vista, 7

- Linux (Ubuntu, Mandriva, Red Hat, CentOS)
- QNX 6.6, 6.5, 6.3
- General Skills
  - Mind Mapping (Freemind, Mind Manager)
  - Concept Mapping (IHMC CMaptools)
  - OOA/D
  - UML
  - Embedded Firmware
  - Microsoft Office
  - Open Office, :LibreOffice
  - GIMP
  - Configuration Management
  - Requirements Management
  - Process Development & Refinement
  - Use Case Development
  - Continuous Integration
  - Unit Testing
  - Code Review Processes & Tools

### **Familiar**

- Programming Languages
  - Gtk
  - HTML
  - XQuery
  - PHP
  - LEX
  - YACC
  - Forth
  - MFC / STL
  - Pascal
  - (Visual) Basic
- Operating Systems
  - Solaris
  - Mac OS
  - Palm OS