

# Eric D. Piehl

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## Experienced Software Engineer

### KEY TALENTS

- Organized, yet innovative, creative problem-solver.
- Often given the least-defined, fuzziest tasks.
- Am often the “go to” person — the one who knows how to do things, or how to find out.
- Am often the interface person between groups with different goals, languages and skillsets — QA, Technical Writing and Technical Support people love working with me.
- Understand the business, technical and management “big picture” concerns, work toward overall goals even as doing a particular task.
- Commitment to the customer, to help coworkers, and to craft superior software systems.
- Collaborate well with teams, or work without supervision.
- Communicate well: written, verbal and listening.
- Pick up new technologies quickly and easily. Lead from behind or by example.

### PROFESSIONAL EXPERIENCE

**Citizen Scientist/Environmental Entrepreneur** 2013/present  
*Wide variety of government, NGO and citizen science organizations.*

- Wrote **static website generator** and **mobile/web app plant identification tool** for gardeners, landscapers and naturalists who want to learn more about our outdoors.
- **Educated** public, educated government officials, provided lots of **IT** and other **technical support** (organized information, tracked activities, mapped worksites and tracked work on these sites, created and maintained websites, created presentations, edited documents), monitored and mapped local parks and bikeways, provided data, bug reports and enhancement requests, maintained parkland, and edited Wikipedia.

**Software Test Engineer/Build Manager/Requirements Traceability Engineer/  
Feature Test Lead/PR Champion/PR Change Control Board member**

*Randstad Technologies (was Spherion) (was Technisource), at General Electric Aviation (was Smiths Aerospace) (was Lear Siegler), Grand Rapids, Michigan USA* 2006/2013

Review and test embedded open-architecture central computer network, for aircraft Boeing **787 Dreamliner** and **P-8A Poseidon**, Lockheed **C-130J** and **AMP**, Airbus **A400M**, Comac **C-919**; and Flight Management System FMS for P-8A MMA and Sikorsky **CH-53K**.

- Wrote automated test procedures during period of 300% requirements churn.
- Modernized other programmers’ tests, adapting to quickly-changing system interfaces and build process. Brought in to fix several groups of tests when late/broken.
- Built standardized software images that sped development for in-house team of eight and outside team of 85. Formalized build process, solving many problems.
- Kept two autoBuild servers and two autoTest servers running during time of immense change. Rebuilt one from bare iron when it broke. Created instrumented-code version.
- Became expert in our software configuration management SCM product Dimensions, wrote procedures, and helped many coworkers accomplish the most complex tasks.
- Interface to teams in two other states and one country, and to in-house Build team.
- Initiated repository of tribal knowledge, procedures, methods and references for work group. Other groups found it very useful, too!
- Analyzed test coverage and traceability, linking tests to Requirements, Requirements to parent requirements, analyzing requirement flowdown sufficiency. Vital for Certification.
- Applied engineering judgment redacting technical documents for transfer to coventure.

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## Other professional accomplishments (software)

- Simplified software product install, made more intuitive, more understandable, more robust, added hidden auto-install of sister products, added validation of and impersonation of network user name, validation of files, web sites, SSL and port access, and rebranded product. **Saved adding 24 personnel:** annual sales **tripled, doubled**, then **doubled** again, all **without** adding additional Technical Support personnel.
- Expanded customer base to new software and hardware platform, creating new product for the Fujitsu MSP market. Liaison to group in Japan who created new Hitachi VOS3 product. **Both products became leaders in their markets.**
- Part of team that reengineered product feature, leapfrogging the competition. Added interfaces between products, speeding our ability to add functionality for our customers.
- Accelerated rollout of new software by setting up testing environment with ten PCs with eight operating system/Service Pack combinations, sending data through UNC, http: and https: connections, with remote databases and reporting means, non-Administrative usernames, domains and workgroups, etc.

## Other professional accomplishments (office)

- Created backup procedures; applied operating system patches; hardened machines against virus, spyware and spam attacks; set up networks; reinstalled operating systems and software; configured, wrote scripts and trained customers for increased productivity.
- Wrote Design Specifications, broke down data flows and processing, wrote Test Plans, Project Resource Estimates, Project Plans and other documents as needed. Documented workgroup processes for software build and test for CMM and CMMI Appraisal.
- Administered and maintained software build process and source code repositories. Administered eight major and several minor releases of maintenance and enhancements to software product.
- Data security officer and data storage administrator for a computer center.

## CERTIFICATIONS, PROFESSIONAL ASSOCIATIONS and PUBLICATIONS

- [Certified Tester, Foundation Level \(CTFL\) #11-CTFL-00648-USA](#), from the [International Software Testing Qualifications Board \(ISTQB\)](#) ([certificate](#), [letter](#), [verification](#)).
- Member, Institute of [Electrical and Electronics Engineers \(IEEE\)](#), and local [IEEE West Michigan Consultants Network](#), [Java Users Group \(JUG\)](#) and [software excellence group](#).
- Piehl, E. "You Can Have Both Security and Flexibility." *Technical Support* (from the [Network and System Professionals Association NaSPA](#)), 2.10, 62+.
- Commercial Certified Pesticide Applicator license ([letter and card](#)).
- An NGO uses [one of my designs as a resource](#).

## EDUCATION

**Continuing education** — always learning new tools and techniques, via *Grand Rapids Community College* and *Grand Valley State University, Grand Rapids, Michigan* and other organizations: lean startup, embedded systems, certification of avionics, requirements specification, software engineering, software testing, networking, network security, information security, hackers, Active Directory, Windows 2003, Agile development, Test-Driven Design (TDD), and Chinese; and development in Android, Apache, C++, C# .NET, Java, MySQL, PHP, National Instruments LabVIEW and DIAdem, and Windows 7 and Azure. Recent additions include Python, BDD, ATDD, and COMSOL Multiphysics.

### **Bachelor of Science in Information Systems, with Distinction**

*University of Redlands, Redlands, California*

(3.86 GPA)

Courses included Systems Design, Database Design, Distributed Processing, Organizational Behavior and Finance.

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## OTHER EXPERIENCE

- Experience on non-profit Board of Directors, Executive Committee, VP, Treasurer, state-wide IT committee, Webmaster, and chaired Officers Compensation Committee. Redesigned capital project budget analysis; implemented new compensation concept; and implemented include files, CSS, more graphics, and upgraded navigation.
- Willing to travel. Have worked in Australia, England, France, Germany, Iceland, Italy, Japan, New Zealand, Singapore and Sweden, plus personal travel to China (including Beijing, Shanghai, Xian), Czech Rep., Denmark, Hungary, Ireland, Norway and Poland.
- Understand written and spoken French. Read Chinese and Japanese enough to travel.
- Former Confidential U.S. security clearance.
- Volunteer [bike trail patrol](#), [Google MapMaker](#), [Master Naturalist](#), [invasive plant assassin](#), [prescribed burn crew](#). Contribute to citizen-science: data, bug reports, enhancements.

## TECHNICAL SKILLS

### Development

- Mobile, Agile development, and System Development Life Cycle (SDLC).
- On embedded systems, to RTCA [DO-178B](#) Level A (Software Considerations in Airborne Systems and Equipment Certification).
- On commercial systems, to CMM and [CMMI](#) development model.
- System design and construction with object-oriented and traditional techniques.
- [Data analytics for a political campaign.](#)

### Programming

- Programming with Ada, Assembler, C, C++, C#, CScript, Java, JavaScript, LabVIEW, make, NAnt, Perl, PHP, Python, VisualBasic (VB) and VBScript.
- Working under gnu gcc, Wind River VxWorks Tornado AE653 Platform for Safety Critical PSC Arinc653 realtime RTOS, Eclipse, Microsoft Visual Studio, MFC, .NET, Simics (Intel's Wind River), VMWare, Dimensions, SourceSafe, DOORS, Windchill, Apache, and others.
- Packaging applications with InstallShield, Microsoft Windows Installer (MSI) and Wise for later end-user install of those applications.
- Webmastering and Web development for using Adobe Dreamweaver, VB, XML, Apache, PHP, and raw HTML.
- Database using MySQL, SQL Server and Access.

### Install and Use

- Install, use and networking of Microsoft Windows 10, 8, 7, and Azure, managed traditionally, with Active Directory (AD) or Systems Management Server (SMS). Some experience with use and networking of Apple macOS and Linux machines.
- Install and use of complete Microsoft Office suite: Outlook, Word, Excel, PowerPoint, Visio, Access and Project. Intuit QuickBooks.
- Serving web applications with Apache HTTP Server and Microsoft IIS, with and w/o SSL.
- Networking under TCP/IP.
- Some exposure to memory profiling using IBM Rational Test RealTime RTRT.
- Hardening computers against attack, with anti-malware scanners, spyware preventers, spam removal, use of user vs. administrative usernames, etc.
- Remote administration of computers, using VNC, and MS Remote Desktop Connection.
- Eradicated difficult browser hijacker RocketTab (with Softonic and Spigot); and viruses Code Red II, Magistr, Melissa and antimalware-killing Klez.h.
- Solved Blue Screen of Death BSoD, and driver issues.
- Monitoring application availability; measuring application, network and server response time against Service Level Agreements (SLA).

*For more information, please see some of my [articles on programming and green topics](#).*