Eric D. Piehl

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Experienced Software Craftsman/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   2013-04-15/present
Government, NGO and citizen science organizations: 4-H, Ada Township, Bugwood, CAPPS, CHADD, Frogwatch, Groundswell, KCS CTP, KCP, LCWM, MDNR, MIPN, MISIN, MNFI, MSUE MN, NCT, NPS, RCWO, SC MC+WMG+CG, TSN WMC HRC EDRR CISMA CWMA, WMEAC, WW.

- 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. Prescribed burn crew.
- Continuing education with GrrCON, GR-JUG, KDL, SoftwareGR and other organizations.

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   2006-02-20/2009-12-04 2009-12-21/2010-02-22 2010-03-01/10-15 2011-02-24/03-24 2011-06-20/07-21 2011-09-19/2012-05-08 2012-06-19/2012-11-29 2012-12-11/2012-12-13 2013-01-17/2013-03-06 2013-03-20/2013-04-12
Review and test embedded open-architecture central computer network, for aircraft Boeing 787 Dreamliner and P-8A Poseidon MMA, Lockheed C-130J and AMP, Airbus A400M, Comac C-919; and Flight Management System FMS for P-8A above 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.

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- 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 Intellectual Property IP in technical documents, for transfer to coventure.

Freelance Computer Contractor, *self-employed*   2005-05/2005-12
Wrote logistics application, created backup procedures; applied operating system patches; hardened machines against malware virus, spyware and spam attacks; set up networks; reinstalled operating systems and software; configured, wrote scripts and trained customers for increased productivity.

Software Developer   1993-07-01/2004-11-19
Compuware Corporation, Detroit, Michigan
Compuware provides software products and services, world-wide.
- 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.
- 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.
- Made functional enhancements, added inter-product interfaces, expanded customer base to new software and hardware platforms, improved reliability, reduced call volumes and increased sales of software products then-called ClientVantage, Interval Pro, File-AID/MVS, File-AID/VOS3, File-AID/XSP and File-AID/Data Solutions.
- Administered and maintained software build process and source code repositories.
- Part of team that reengineered product feature, leapfrogging the competition.
- Added interfaces between products, accelerating our ability to add functionality for our customers.
- Set up testing environment for new software 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.

Software Developer/Senior Systems Software Engineer   1984-05/1993-06
Sterling Software, Inc., San Bernardino, California
Sterling Software was large software vendor, later acquired by Computer Associates.
Technical Lead of Independent Platform Group. Programmer on product *CA Disk Backup and Restore* (was *BrightStor CA-Disk*) (was *DMS/OS Data Storage Management System*).
- Administered eight major and several minor releases of maintenance and enhancements to software product.
- 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.**
- Reengineered product interface to four security packages, during a period of major changes to these products. Hardened product from US DoD Trusted Computer System Evaluation Criteria "Orange book" D-level to B2-level-equivalent.
- Data security officer and DASD management consultant for the computer center.

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Sr. Information Systems Officer/Systems Programmer/Systems Engineer
Security Pacific National Bank, Glendale/Brea, California   1981-11/1984-05
SPNB was a large 700-branch bank, later acquired by Bank of America.
- Improved throughput and error recovery, added transactions, and created procedures to avoid disk space problems in Banking Terminal System (BTS).

Quality Control Technician
Fansteel, California Drop Forge Div., Los Angeles, California   1980/1981
- Approved materials and processes as conforming to MIL, ASTM and other specs.
- Ran metallurgical tests during manufacture of titanium, steel and cobalt-alloy aircraft parts for military and civilian aircraft.

CERTIFICATIONS and PROFESSIONAL ASSOCIATIONS
- Certified Tester, Foundation Level (CTFL) #11-CTFL-00648-USA, 2011-04-11/∞, from the International Software Testing Qualifications Board (ISTQB) (certificate, letter, verification).
- Member, Institute of Electrical and Electronics Engineers (IEEE).
- Member, IEEE West Michigan Consultants Network.
- Member, local Java Users Group (GR-JUG).
- Member, local XP software excellence group.
- Commercial Certified Pesticide Applicator, incl. Pest Management categories (2) Forestry, (6) Right-of-Way and (10) Demonstration & Research, MI license C003130396, 2013-12-12, expires 2016-12-31 (letter and card). Master Naturalist 2013. Google MapMaker GMM.
- Have held other memberships and certifications, including from Network and Systems Professionals Association.

PUBLICATIONS
- Piehl, E. "You Can Have Both Security and Flexibility." *Technical Support* (from the Network and System Professionals Association NaSPA), 2.10 (1988), 62+.
- An NGO uses one of my designs as a resource.
- Other unpublished works, such as "Biological Systems Architecture".
- Presentations in Australia, England, France, Germany, Iceland, Italy, Japan, New Zealand, Singapore and Sweden.

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*   1987-12
University of Redlands, Redlands, California   *(3.86 GPA)*
Courses included Systems Design, Database Design, Distributed Processing, Organizational Behavior and Finance.

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.

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Personal copy

- 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 and Xi'an), 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.

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 (ALC/BAL and Intel, some PowerPC and ARM), C, C++, C#, COBOL, CLIST, CScript, Fortran, JCL, Java, JavaScript, JScript, LabVIEW, make, NAnt, Panvalet, Perl, PHP, PL/I, Python, Ruby, SAP, SAS, SPSS, VisualBasic (VB), VBScript, YACC and Lex. Code disassembly, reverse engineering.
- Programming commercial systems, and embedded systems to DO-178B Level A.
- Working under gnu gcc, (Intel's) Wind River VxWorks Tornado AE653 Platform for Safety Critical PSC Arinc653 realtime RTOS, Eclipse, Microsoft Visual Studio, MFC, .NET, Simics (Intel's Wind River, was Virtutech), VMWare, TSO/ISPF, Dimensions, SourceSafe, Endevor, DOORS, Windchill, Apache, and others.
- Packaging applications with InstallShield, Microsoft Windows Installer (MSI), Wise and SMP/E for later end-user install of those applications.
- Webmastering and Web development for using FrontPage (Microsoft), Dreamweaver (Adobe, was Macromedia), VB, XML, Apache, PHP, and raw HTML.
- Database using MySQL, SQL Server, Access, DB2 and IMS.

Install and Use
- Install, use and networking of Microsoft Windows 10, 8, 7, Azure, Vista, Server 2003, XP, 2000, NT, 98 and 95, managed traditionally, with Active Directory (AD) or Systems Management Server (SMS). Some experience with use and networking of Apple Mac OS X, macOS, and Linux machines.
- Install and use of complete Microsoft Office suite: Outlook, Word, Excel, PowerPoint, Visio, Access and Project. Corel WordPerfect and Quattro Pro. Intuit QuickBooks.
- Serving web applications with Apache HTTP Server and Microsoft IIS, with and without SSL.
- Networking under TCP/IP, SDLC and SNA.
- 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).
- Install and use of IBM mainframe z/OS, OS/390, and VM, security with IBM RACF, Fujitsu RACF, CA-ACF2 and CA-Top Secret.
- Install and use of Novell Netware.

For more information, please see some of my articles on programming and green topics.

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