

Richard Paul Welty

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Technical Skills

Languages: Java, JavaScript, XML, PHP, C/C++, Lisp, assemblers, other

Databases: Oracle, PostgreSQL, Informix, MySQL, Sybase, DB2, Hibernate, JDBC

Platforms: Amazon cloud, PC, SUN, SGI, Symbolics, VAX, PDP-11, other

Environments: J2EE, JSF, Spring, Eclipse, Netbeans, BSD, Linux (RHEL, CentOS, Amazon), Solaris, IRIX, Symbolics, X11, Windows, Cordys, other

Routers: Cisco IOS, Enterasys/Riverstone, Ascend GRF & MAX TNT, Gated

Firewalls: OpenBSD PF, Linux IPChains and IPTables

Other: OpenStreetMap (GIS), Apache Lucene/Solr (search engine)

Experience

Adjunct Instructor, Computer Science, University at Albany (SUNY), 1/2013 to 5/2013

- Taught graduate course in Computer Networking

Software Consultant, Logic Technologies, 6/2011 to 2/2013

- Supported a variety of projects at GE Global Research. Technologies used included Linux, PostgreSQL, Apache Solr, Java, Java Server Faces, Rich Faces, Oracle, Tibco Spotfire, and Cordys.
- Built and supported Amazon Linux instances in the EC2 Cloud for Vehicle Forge, installed, configured and maintained PostgreSQL 9.1.3 servers with Master/Hot Standby streaming replication, failover and connection pooling
- Built, configured and installed Apache Solr search engine instances on Amazon Linux instances in the EC2 Cloud. Devised and implemented both pull and push solutions for maintaining search indices of VehicleForge metadata. Devised and implemented pull system for indexing project artifacts (Office Documents, PDFs, etc) stored in GIT repositories.

President, OSMF US – 11/2011 to present, Vice President, OSMF US – 8/2010 to 11/2011

- Served as board member of the US Chapter of the OpenStreetMap foundation in a number of officer positions. Worked to increase visibility of project within the US, and on conferences for the US Mapping community.

Participant, OpenStreetMapProject – 4/2009 to present

- Editing/Reviewing OpenStreetMap data
- Studying and evaluating issues relating to conflation and imports
- Building tools for handling format conversions

Java/Database Consultant – 5/2010 to 5/2011, Yoh Consulting assigned to GE Global Research

- Developed Java backend software for Wind Telematics logistics system. Used Spring, Hibernate, and JPA against Oracle backend.

Secretary, OSMF US – 3/2010 to 8/2010

- Served as member of interim board and Secretary. Assisted in process of developing and incorporating new OSM US chapter.

Java/Database Consultant – 8/2007 to 12/2009, Proliant Consulting assigned to Bank of America

- Developed software in Java for backed end processing of New York City and New York State tax processing. Provided production support for data transmission processes. Developed approach to generate pdf files to support NYC DOF research needs. Environment used Eclipse, Informix, DB2, XML, iText and Hibernate.

Consultant – 5/2007 to 6/2007, Celery LLC

- Provided System Administration support
- Developed strategies for Intelligent Character Recognition handling in Celery Systems

VP Engineering – 1/2007 to 4/2007, Celery LLC

- Organized deployment of Celery infrastructure to colocation facilities
- Planned and directed evolution of software to production system, migration from VB.Net prototype to Java/Linux production environment.
- Developed architecture for massive parallelism of fax-email gateway system, with a focus on survivability in the face of network outages.
- Developed scaling projections for 5 year plan.

Consultant, Network Engineering and Software Development – 6/2001 to present, Averill Park Networking

- Worked with clients on applications development, security, network engineering, Internet server deployment and configuration, database tuning, and spam control.
- Developed and supported Java applications. SQL database backends included Informix and PostgreSQL. Development environments included Eclipse and Netbeans. Development included both Eclipse Plugins using SWT/JFace/SWT-AWT Bridge and the Netbeans Applications Platform. Tools used included Hibernate, RXTX, JDOM, JUnit, log4j, and JDBC.
- Developed PHP/PostgreSQL web applications.
- Administered PostgreSQL databases.
- Designed and Deployed Internet Access solutions including Firewalls, Web Servers, Mail Servers, and IPsec & SSH communications security using Open Source solutions, including software such as OpenBSD, Redhat and Fedora Linux distributions, the Exim Mail Transport Agent, Dovecot IMAP, Courier IMAP, PostgreSQL database back ends, and various antivirus and spam control solutions. Largest deployment was for an ISP serving 6000 customers.
- Administered Fedora Core Linux and Centos Linux web servers.

Technical Manager, Software Development – 1/2001 to 5/2001, Avaya, Inc.

- In charge of Software Development group in Troy, NY facility.
- Managed development of VAM (“VPN Access Manager”) software for web access to restricted subset of VPNManager functionality, using Java Servlets, LDAP, and MySQL.
- Member of committee which specified targets and methodologies for integration of VPNet VPNManager with Avaya CajunView and CajunRules software.
- Participated in Internet Engineering Task Force activities in network security and management.

Director, Management Applications – 4/2000 to 1/2001, VPNet Technologies, Inc.

- Started Software Development group in Troy VPNet facility. Group focused on remote management of large scale Virtual Private Network (VPN) deployments.
- Developed architectural design for VPNManager “Next Generation”.
- Managed development of VAM (“VPN Access Manager”) software for web access to restricted subset of VPNManager functionality, using Java Servlets, LDAP, and MySQL.
- Developed Models for VPN devices for Aprisma (Cabletron) Spectrum.
- Participated in Internet Engineering Task Force activities in network security and management.

Manager Network Engineering – 8/1999-2/2000, VPNet Technologies, Inc.

- Managed Network Engineering staff at the VPNet Troy, NY Network Operations Center.
 - Staff was responsible for design and deployment of customer Frame Relay networks, and assessment of legacy networks.
 - Developed approaches to Managed VPN Services.
 - Developed Models for VPN devices for Aprisma (Cabletron) Spectrum.
- *VP Engineering – 9/1998 to 8/1999, NeWorks Networking, Inc.*
 - Managed Engineering and IT for NeWorks Networking, Inc., a startup Network Management Services business based in Troy, New York.
 - Planned network, systems and software in Network Operations Center and organized the installation and deployment projects.
 - Administered Aprisma (Cabletron) Spectrum Network Management Software.
 - Developed security policy for company systems.
 - Devised policies and methods for dealing with various IP routing complexities that result from taking on management of legacy customer networks.
 - Developed plan for Phase 2 of NOC development, a proposed upgrade of servers and network topology for greater redundancy and improved internal security.

Founder – 5/1998 to 8/1998, NeWorks Networking, Inc.

- Founded NeWorks Networking, Inc., a firm focused on outsourced management of Wide Area Networks, principally Frame Relay.
- Operated company for several months until a CEO was identified and brought in.

Chief Internet Engineer – 6/1997 to 5/1998, INet Solutions/CMA

- Selected Hardware & Software for Web, Mail, and Firewall servers.
- Managed IP address allocation.
- Developed and maintained router configurations for Cisco and Ascend routers using OSPF and BGP4 routing protocols.
- Implemented IP over ATM WAN architecture using Cabletron ATM Switches and Ascend GRF routers.
- Coordinated implementation of Peering arrangements with other Network Service Providers.
- Developed architecture for customer Web/Mail/Firewall farms. Developed company Firewall strategy.
- Built, tested and administered Unix and Linux based servers.

Software Engineer – 11/1987 to 4/1995, Infologic, 4/1995 to 6/1997, CMA Consulting Services

Assigned to GE Corporate Research & Development, Schenectady

- Software Developer for GE Research & Development Center Image Understanding group. Worked on DARPA and ORD projects (Threads, Radius Common Development Environment, RADIUS Phase II, and SAIC/SMS). Projects involved the use of AI technology in the interpretation and analysis of aerial and satellite imagery.
- Developed site and photogrammetric camera models for 3d representation of Schenectady Air National Guard base.
- Managed 3 deliveries of GE CRD and partner components of RADIUS Phase II and SAIC/SMS to Lockheed Martin.
- Integrated and evaluated software from University and Industrial sources to assess suitability for usage by Image Analysts.
- Supported testing and evaluation of Radius software at both Lockheed Martin Valley Forge and at the National Picture Interpretation Center in Washington DC.
- Developed a Data Exchange Format for the Image Understanding Environment project.
- Work was done on Symbolics Lisp Machines and on Sun Sparc workstations using Common Lisp, C, and C++ with X11.

Software Engineer – 6/1986 to 11/1987, InfoLogic Software Inc.

Assigned to Computer Science Branch, GE Corporate Research & Development.

- Designed, documented, and implemented graphic editors for the description of software and hardware systems for the Computing Systems Program.
- Wrote interface code to communicate between text and graphic editors.
- Work was done in Zetalisp using Symbolics Lisp Machines.

Education

1980 B.S. Computer Science, minor in Literature, Rensselaer Polytechnic Institute, Troy, NY.

Honors

Rensselaer Medal Scholarship.

Dean's List, Fall 1979 and Spring 1980.

Publications

J. L. Mundy and R. Welty and Keith Price and IUE Committee,
“The Image Understanding Environment: Data Exchange”
Proceedings of the DARPA Image Understanding Workshop, Washington D.C.,
April 1993

J. L. Mundy, R. Welty, L. Quam, T. Strat, W. Bremner, M. Horwedel,
D. Hackett and A. Hoogs, “The Radius Common Development Environment”,
Proceedings of the DARPA Image Understanding Workshop, San Diego,
January 1992

J. L. Mundy, P. M. Payton, M. H. Brill, E. A. Barrett, R. P. Welty,
“3-D Model Alignment Without Computing Pose”; Proceedings of the DARPA
Image Understanding Workshop, San Diego, January 1992