



Paul Cowan

USA Technologies, Inc
Malvern, PA (partial remote)

Senior Software Engineer
Sept 2014 – Present

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610-400-4216
Downingtown, PA USA

I work as a full-stack developer using primarily Java, SQL, Javascript, and HTML to enhance and support USAT Technologies' real-time financial transaction processing systems and embedded device network.

My goal is to find simple solutions to complex problems with minimal direction and least effort.

Web Services – Coded SOAP based web services using Apache Axis and Oracle SQL. Streamlined service development by introducing JAX-WS and Hibernate Validator declarative service descriptors.

15 years of software development experience focused on core Java, JEE, and database technologies.

ISO8583 – Created payment gateway per standard specifications to interface with large national acquiring banks. Designed Java and SQL code for concurrency and scalability.

Excellent communicator respected by management while always keeping a hand in the code.

Reporting Systems – Enhanced transaction reporting systems per customer requirements using core Java, Jetty, Oracle SQL, Stored Procedures, HTML, JavaScript, and JQuery.

Passionate about open-source technologies; active contributor to several communities.

Continuous Integration – Improved release quality and general respect for the development team by setting up TeamCity CI and training developers on proper JUnit and regression testing practices.

Contributed the “WebSocket Client” tutorial to the official JBoss WildFly quickstart GitHub project.

Caucho Technology
San Diego, CA (full-time remote)

Senior Software Engineer
October 2010 – June 2014

Container programming, or “programming for other programmers” is not something every engineer would enjoy but I embraced and excelled at it. My duties at Caucho were split between coding, developing instructional documentation, supporting customers remotely and on-site, and participating in sales calls.

7 years of payment card industry experience dealing with PCI and SOX compliance intricacies.

Resin 4.0 – Added features, fixed bugs, and wrote tests, while being careful to maintain high performance, thread safe concurrency, and JEE6 specification compatibility.

Extensive understanding of JEE technologies having worked as a JEE6 application server staff developer.

EL 3 – Implemented JEE 7 Expression Language 3 for Resin 5.0. EL 3 is a major upgrade which includes lambda expressions, stream operations on a collection, and static calls among others. Executed JEE 7 TCK compliance testing. Interacted with EL 3 expert group regarding issues.

Java 8 enthusiast skilled at using Lambda expressing as a result of coding a JSP Lambda express parser.

Baratine – Made significant contributions to the design and architecture of Caucho's major new technology breakthrough. Baratine is a new breed of ultra high performance “in-memory” application server. Please see [baratine.io](#) and I would be happy to discuss further in person.

IoT tinkerer and self-taught electrical engineer knowledgeable about circuit board design and product engineering.

JAMM – Coded the majority of Resin's internal application health monitoring system. JAMM runs health checks, executes remediation actions, and generates concisely formatted PDF reports.

Contributed the public Arduino Thermistor library to Particle Photon.

JavaOne – Engineer on-site at Caucho's booth during the 2011 and 2012 JavaOne conferences. Gave a live recorded video interview on Resin for InfoQ online tech magazine.

Unix, Linux, OSX shell hacker good with Perl, Python, Vi, regular expressions, etc.

Active member of the Philadelphia Area Java Users' Group (Philly JUG) and Valley Forge Technology Group.

Monospace Software LLC
Downingtown, PA

Owner Engineer
September 2010 – Present

I started my own software company in 2010 as a means to pursue independent programming opportunities and to work for Caucho as a contractor. I am proud to have launched one product (currently inactive).

KegNet – www.kegnetwork.com – KegNet allows home beer “kegerator” owners to track and remotely view their beer keg volume, consumption, refrigerator temperature, and socialize with other enthusiasts. I developed both the client hardware (custom circuit-board) and server software. The server uses the JEE7 technology stack on JBoss Wildfly; JSF (Mojarra with PrimeFaces), JPA (Hibernate), CDI (Weld), JAX-RS (RESTEasy), Jackson, and MySQL, on a Linux cloud.

NOKIA/NAVTEQ – Traffic.com
Chesterbrook, PA

Senior Architect, October 2009 – October 2010
Lead Engineer, July 2009 – October 2009
Senior Engineer, October 2007 – July 2009

While working on the “core development” team, I earned a reputation as the go-to guy for technologies used in the back-end; AMQP, Coherence, Spring, JBoss, threading, database pools.

AMQP – Led a large-scale effort to move from an EJB service based architecture to a message driven pipelined architecture. Designed evaluations, performed benchmarks, made recommendations.

TEQTalk – Conducted 1.5 hour long training for approximately 1000 R&D employees titled “Heterogeneous High-Speed Asynchronous Messaging” on AMQP, JMS, and asynchronous messaging systems.

User Profile – Served as lead engineer for a 5 person development team of Java and Database developers on a full cycle development effort. Project utilized UML, JEE5 with JPA, Hibernate, Spring, Oracle, and JBoss.

JPA Testing Framework – Developed a JUnit extension to facilitate thorough unit testing of JPA-based services by automatically bootstrapping a populated in-memory HSQL database.

Oracle Coherence – Led the level-2 caching effort and developed the majority of the “glue” code that ran Coherence in the environment. Primary POC for Coherence issues or questions.

QA LoadTester – Created an innovative Maven plugin that united the open source load-testing tool Grinder with Maven. Enabled QA to test without engineer assistance by writing basic Jython language statements.

USA Technologies, Inc
Malvern, PA

Senior Application Developer
July 2003 – October 2007

Served as lead Java developer/senior technician on a 5 person development/support team. Migrated legacy Perl applications to Java while improving speed, scalability, and security. Introduced software development processes; Bugzilla, Wiki, CVS, and migration planning. Received USA Technologies “Outstanding Contribution” award 2004.

InternetSeer.com, Inc
Thornton, PA

Network Applications Specialist
October 2000 – July 2003

Geisinger Health System
Hershey, PA

Technical Analyst
February 1999 – October 2000

Bachelor of Science in Computer Science, Millersville University, Millersville, PA, May 1999
Sun Certified Programmer for the Java 2 Platform, November 9, 1999