

Joseph Ellsworth

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Accomplished and results manager engineer with over 23 years experience in business and distributed computing and software. Has built and managed teams with proven ability to solve complex problems, leveraging a wide range of technologies. Principle architect experience in fortune 50 scale projects. Demonstrated ability to develop new product ideas for large-scale deployment. Cross-functional expertise in analysis, core issue identification, and problem resolution. Excellent interpersonal skills, Able to communicate and collaborate with co-workers at all levels. Expert in high volume, high reliability Internet applications including LAMP and advanced SOA web services.

Areas of Expertise

Corporate & Management

- CTO, CEO, VP experience multiple companies.
- Product formulation from concept through delivery.
- Relentless drive towards corporate goals.
- Product design from basic requirements
- Team building and performance improvement
- Cross team architect and facilitator
- Successful start-up and Fortune 50 experience
- Building teams from 3 to 50 people
- Managing up to \$9 million budgets
- Sales and pre-sales technical expert
- Early recognition of probable impact from disruptive technologies.
- Core issue identification and resolution
- Executive briefing and technology strategy
- Mentoring and training

Energy and Conservation

- Extract water from air using solar energy
- Renewable cooling with less energy
- Thermal, electrical and financial modeling.
- N-Tier microcomputer assisted sensor integration
- Data center cooling with less energy

Software & Engineering

- Distributed systems architecture
- High performance, High Availability Internet, Ecommerce, SSO and Identity management
- Fortune 50 Web, SSO, N-Tier multi-million user
- SOA, Web Service applications.
- Extensive XML including native XML database, DOM, XSL, XSLT, XPATH, REST
- Relational schema design and optimization
- Transformation and MOM middleware
- OOA, OOD, OOP, Java, Python, Ruby, SQL, C#, C++, Smalltalk, Win 3.1API, VB, Windows, .Net, WinForms, CVS, etc.
- Performance troubleshooting and optimization
- RAD, Agile, Test Driven and feature driven development.
- Linux, Windows, HP/US, Solaris, etc

Embedded Control And Automation

- Automation and embedded control systems.
- AVR, MSP430, Zilog, Rabbit, Intel, etc
- Circuit design from discrete component / chips level includes firmware, prototype and test.
- Numerical positioning and Aiming
- Motor control, Stepper, DC & AC
- TWI, I2C, SPI, 1 Wire, RS422, RS232
- High level scripting GCODE generation
- Alarm integration across incompatible architectures.
- J2ME, C,C++, Bascom, Windows CE, Palm
- GPS, GIS and telephony integration

Experience and Accomplishments

Principal Architect / SDE: **Amazon.com** Seattle, WA Jan 2008 - OCT 2009

- (Details confidential) One of approximately 50 principal engineers corporate wide sharing technical oversight over several thousand SDE engineers
- Principal SDE and architect working in the Website Application platform group within Amazon. This group is responsible for designing, building and managing Amazon's next generation web hosting platform.
- Amazon is the #1 Internet retailer in the world. They are also a fast growing averaging 30% growth per year while continually introducing new products and services. The size and rapid growth at Amazon present a number of interesting challenges which Joseph has helped address. Amazon has a very large and most complex SOA architecture including N tiers and many app server technologies.
- Joe's contributions have improved the code free configuration capability of the next generation web hosting platform. He has also established a technical architecture ideally suited to support Amazons growth to support next 10 years of growth at a lower cost and while delivering higher performance to the end user.
- Agile methodologies including scrum and scrum modified to improve product predictability.
- Also acted as Principal Product Manger for first 10 months. Principal product manager formulating strategy for taking Amazons Enterprise computing platform to market. (Details confidential) Extensive product design work centered around market facing SOA used to support next generation web products.
- Java, XML, REST, SOA, Erlang, Database and distributed systems, Python, Javascript.

CTO / Principal Engineer: **A2WH, DBA** Bainbridge Island, WA 2008-Current

- Patent pending technology for extracting water from air using solar energy.
- Provided product conceptual model, product goals and go to market strategy.
- Thermal and chemical modeling.
- Physical prototype including plastic fab, mechanical design and electronics.
- Product and technology vision, definition and implementation as CTO, Sales and pre-sales technical, Budgetary financial planning

CTO & Principal Engineer: **XDOBS.COM, LLC** Heber City, UT 2003-2008

- Product and technology vision, definition and implementation as CTO, Sales and pre-sales technical, Budgetary financial planning
- Web based mapping and user tracking using GPS enabled J2ME phones and GIS maps.
- Legacy and relational integration using MOM middleware server in C#.
- Mobile data collection client windows CE C#, .net, WinForms and XML based data driven data acquisition.
- Air to water using no grid power.

- Renewable cooling Air conditioning with 90% less electricity
- Data center cooling with 75% less electricity
- GPS based mailable registration card to meet Homeland Security and Department of Agriculture animal registration requirements intended to protect food chain in event of massive disease or attack.
- High level scripting library generating GCODE for CNC motion control
- Alarm detection and aggregation unit which collected alarm conditions from incompatible Telco equipment. output lines could be set directly from network events, SNMP status events
- Proficient in: C#, WinForms, C++, Bascom, GCODE, Ruby, VB, XSL, XML, DOM, XSLT, XPATH, SOA, Web Services, SQL, J2ME, J2SE, JavaScript, Jetty, AVR, MSP430, Linux, IIS, Apache, Tomcat, Jetty, JSP, ASP, Visual tools such as Labview, CVS, Agile, test driven and feature driven development, AVR and TI micro controllers, TWI, I2C, 1 Wire and SPI, Circuit design, PCB, prototyping, firmware and debugging.

- Development of product concept and market positioning as CTO
- Closed first \$1.5 million in sales and \$4 million investment round.
- Managed 9-person cross-functional team.
- Principle architect in developing XDISECT a native XML database with taxonomy constrained search and flexible schema.
 - Extensive high performance indexing and cross taxonomy search semantics.
 - Sophisticated parsing for data and semi fuzzy query semantics
 - Principal architect for multiple server replication in unreliable environment,
 - Load balanced SOA proxy for ultra high scalability and high availability web applications.
 - Advanced taxonomy constrained search,
 - Flexible and transparent support for rapidly changing schemas
 - XSL output transformation auto selection of client or server side XSL execution.
 - Ideal platform for large scale data warehouse and BI (Business Intelligence)
 - Advanced XSL based template expansion with embedded python scripting. Substantially exceeds PHP.
 - Patents filed on large scale flexible searching using semi fuzzy taxonomy constrained search.
 - Architected and deployed fortune 50 Portal with XML Web SSO, custom content delivery and identity aggregation
 - Key designer of major web portal at Hewlett Packard, who continued using the product through 2005.
 - Advanced security infrastructure through server plug-in (based on XDISECT).
 - SSO and identity management, advanced query and scripting language, XSL based web questionnaire,
- Proficient: Java, C, C++, XSL, XML, DOM, XSLT, XPATH, .NET, SOAP, SOA, Web Services, Python, SQL, GIS, JavaScript, DHTML, Linux, IIS, Apache, Tomcat, SSO, CVS, Identity management, Identity aggregation, portals and custom web content, Agile, test driven and feature driven development.

- **ESpeak Solutions** Program Manager
 - Managed up to 50 employees and a \$9 million budget
 - Principle architect for sophisticated distributed solutions which where predecessor to modern E-Services including the SOAP portion of .net
 - HP / Swatch universal entertainment portal unveiled at Comdex fall 1999 keynote. One of first location based and user characteristic sensitive systems for delivery of special offers.
 - Multimedia portable entertainment portal in conjunction with Nokia. First fortune 50 demonstration of mobile technology coupled with intelligent E-service matching, personalized content and location sensitivity to be demonstrated on mobile devices.
 - Ultra high performance SOA with transparent failover

- Industry first broker based E-Service selection with cost and performance based routing.
- Multiple HP patents.
- **Electronic Solutions Now**, Section Manager: SSO Web portal with custom content, 20-person team, \$2 million budget. Industry leading Fortune 50 Web portal one of the first large scale custom content and user profile based menus. HP patent on SSO based user aggregation.
- **Quote & Order Assistant**, project manager: Web configurator, search and shopping, 4-person team, \$1 million budget. First fortune 50 scale web shopping cart to include configuration of complex server products.
- **Watson Server**, Project manager: 9-person team, \$3 million budget
 - World wide server for 10,000 member sales force to SAP
 - SAP BAPI integration with data driven data integration.
 - Driven Legacy system integration techniques
 - Cross team integration architect
 - MOM based integration middleware with firewall piercing
- Proficient: C++,C#, Java, XML, XSL, XSLT, DOM, Ruby, Python, VB, Perl, Javascript, SOA, Web Services, SQL, Oracle, Forte, IIS, Apache, Fast CGI, JSP, CVS, Code Safe, Identity management, Identity aggregation, portals and custom web content., RAD, Agile and feature driven development.

OOA, OOD, OOP Distributed systems Consultant: **Nationwide 1990-1994**

- Object-oriented and distributed systems consulting to fortune 1000 companies
- Hewlett Packard, Northern Telecom, US Sprint, and Anderson Consulting
- Mentored leaders in companies beginning to adopt OO technologies
- Lead architect and team lead services to groups scaling their projects for deployment
- SAP Integration for SFA
- Regularly bailed out project teams in trouble. Quite often involved diagnosing key performance issues distributed database projects serving thousands of users.
- Proficient: C++, Smalltalk, Object Pascal, Prolog, VB, SQL, Oracle, OOA, OOD, OOP, RAD the predecessor to Agile and Test driven development, CVS, RCS, SourceSafe.

Lead Developer, Architect and Sales: **Busiware LLC, SLC Utah 1984-1990**

- P&L, sales, engineering, marketing, media, and support 1 to 5 person team
- Provided concept design, systems architecture
- Software analysis, architecture, design, implementation and integration
- Hardware OEM design, integration and installation most solutions
- Insurance claims administration, point of sale, municipal billing applications. RPG to C++ Translator
- Sales, design and implementation of photo-voltaic power systems
- Proficient: C++, Smalltalk, Object Pascal, Basic, Prolog, VB, QuickBasic, SQL, Oracle, Informix, Progress, OOA, OOD, OOP, RPG,AS/400
- 3 axis numerical control milling robot large format. Including PWM firmware and electronics design.

Education

Business Management and IT

- Weber State College, Ogden Utah

Additional Information

Honors / Awards

- 1998 - 2001 - Speaker at multiple identity management and identity aggregation conferences. Patents pending for environment heat operated distillation, air to water and renewable cooling. Patents for SSO and early SOA architecture work while at Hewlett Packard.
- 1985 Certified Real Estate license Utah
- 1987 ROA selling General Electric