

# Steven F Dearborn

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## *Key Qualifications*

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- Guide and implement new technology solutions which enable business agility and product competitiveness
- Progressive technology advocacy, operationalization and knowledge transfer
- Help organizations make clear technology decisions affecting enterprise architecture by providing thoughtful analysis and recommendation of solutions: enterprise architecture needs assessment, product evaluation, proof-of-concept development and solution recommendation
- Provide cybersecurity expertise to secure digital consumer accounts and protect loyalty programs: identity, authentication, authorization, access control, and security policy development and enforcement
- Mathematics, numeric and stochastic algorithm design and development, high-performance computing, digital signature and encryption, cryptography, steganography
- Technical oversight, implementation, coordination and delivery of mission-driven solutions
- Research and development, proof-of-concept, prototype demonstration, ideation, iteration
- Road warrior survivor pre- and post-sales software product support, focus on listening to customer needs, finding solutions to problems and delivering results
- Values: Just-in-Time, Lean, Agile, demonstrating working software, build, test and deployment automation, and consistent delivery of high-quality information technology solutions

## *Key Management and Technical Abilities*

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- Producing product, release and iteration plans: themes, features, epics, backlogs, relative estimation, forecasting and portfolio coordination
- Leading development teams: applying, Lean/Agile principles and practices, facilitating continuous improvement and identifying and removing impediments
- Producing architectural solutions used to estimate project schedules, resources and budgets, enterprise architecture, portfolio management
- Implementing and testing complex software applications: object-oriented, automated test-driven development, continuous integration and deployment
- Leading R&D, proof of technology and implementation teams: Web Services, APIs and Web and Mobile apps, Open Source Software
- Capturing product needs, user stories, acceptance criteria, definition of done, tests: VersionOne, Rally, Confluence, Jira
- Architecting and implementing secure technology solutions and information exchanges: information confidentiality, data integrity, non-repudiation, ICAM, SAML, OAuth, OpenID Connect
- Recovering operational, systems and software architectures: visual modeling and incremental, model-driven development: SPARX, MDA/MDD

## *Career Summary*

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### **Digital Transformation Subject Matter Expert**

Cyber Guilde (February 2016 – Present)

Expose and leverage government agency digital capabilities via API publication and developer engagement. Microservices, software-based infrastructure, Docker, Compose, Swarm. Employ OpenAPI/Swagger standards, open source tools and SDKs to optimize the manufacture of APIs.

Modernize international information exchanges by recommending technology solutions and methods that assure confidentiality and incorruptibility of highly sensitive information. Define agency's information-sharing security framework that complies with NIST and ISO security and privacy controls and standards.

Verify the performance of OpenAM/DJ identity and access control implementation hosted on AWS Cloud.

### **API Management Platform Lead**

Cyber Guilde (January 2015 – November 2016)

Provide technical solutions and implementation oversight of API security including delivery of OAuth, OpenID Connect, and adaptive, two-factor authentication used to protect online consumer accounts. Security policy definition and enforcement: RSA, Ping Federate, Ping Access, API Gateway.

Provide alternative API management solutions and prepare technology implementation and transition recommendations: Google/Apigee Edge, TIBCO Mashery, Akana API Management, IBM API Management. Business and technology oversight of cloud implementation including integrations with on-premise authentication, authorization, and access control infrastructure.

Direct R&D to deliver a developer engagement solution based on Drupal, Swagger, Docker and continuous delivery best practices. Oversee research of developer.com sites to collect common best practices and make implementation recommendations. Highlights how to treat API as a product and identifies key performance indicators for sustaining an API product and operating an API program.

### **Web Services Security Subject Matter Expert**

Cyber Guilde (January 2013 – October 2016)

Provide technology alternatives used to protect/mitigate international information exchanges from security threats. Investigate pertinent technologies used to secure web services both provided and consumed across domains. Define approach for federated identity and entitlement management and user attribute exchange: SAML, OAuth, and OpenID Connect. Conducted cryptographic algorithm analysis, proof-of-concept and recommendation for encryption and digital signature. Provide Java source code examples and demonstrations of SAML, OpenID Connect credentials generation and NIST AES encryption and decryption. XML, SOAP, SAML, WS-Security, JSON, REST, JWT

### **API Design Lead and Technology Advocate**

Cyber Guilde (January 2014 – January 2015)

Complete first generation REST APIs for global hospitality services provider needed to support mobile and web digital business initiatives. Provide implementation expertise and oversight of REST API product: design and composition, protection, lifecycle and developer engagement capabilities.

Solved #1 consumer complaint.

As API Security subject matter expert, provide definition and oversight of OAuth authorization and API access control implementations. Implemented automated acceptance testing framework for APIs using Node.js. Provide guidance to offshore API implementation teams. Led research & development effort to automatically generate interactive API documentation and API prototypes using Swagger and Couchbase.

### **Solutions Architect, Implementation Lead, Agile Scrum Master**

Cyber Guilde (June 2009 – 2013)

At World Bank Group, International Finance Corp, delivered soft token, multi factor authentication services to access B2B web applications. Supervised and coordinated all technology design, development, testing and IT infrastructure necessary to connect first financial application into production environment within five months. AAA, SiteMinder, ARCOT, LDAP, Sailpoint IDIQ

At DOD/TATRC: Technical lead of R&D effort, demonstrated the feasibility of exchanging medical resource information over the Nationwide Health Information Network (NHIN). Developed user experience to visualize the utilization, capacity, availability, and deployment of medical resources during catastrophic events. Agile, Java, JEE, MDD, CONNECT, EDXL, Hospital Availability Exchange, iOS iPhone App, Objective-C

At Digital Infuzion/Genzyme, provided data modeling, analysis, and database design of Disease Registry supporting medical clinical trials. UML, SPARX, CDISC

At NATO, defined Intelligence Functional Services and platform architectures. Define web services APIs to integrate and exchange information with external enterprise capabilities. Agile, DODAF, NAF, UML, SPARX

### **Enterprise SOA Architect and Implementation Lead**

Department of Homeland Security, Customs and Border Protection (May 2008 – June 2009)

Integrated disparate COTS products and deliver a high-availability, secure, managed, and interoperable enterprise service bus solution. Build-out the hardware, OS and COTS software infrastructure necessary to develop and manage web services: VMware, WebSphere DataPower, Message Broker, MQ, Oracle ESB, BPEL Process Manager, Systinet, and AmberPoint.

Defined security policy implementation for web services including: message header, digital signature and logging, for XML over SOAP, JMS, and MQ.

### **Innovative Research & Development Lead**

Department of Homeland Security, Immigration and Customs Enforcement (May 2007 – April 2008)

Assess, recommend, and implement a high-available, secure and integrated web services environment. Build-out the hardware and software infrastructure necessary to develop service-oriented architecture: WebSphere DataPower, Enterprise Service Bus (WESB), Process Server (WPS), Java and JCA adapters in HA data center.

Established Enterprise Architecture and data model data transformation guidelines to comply with the National Information Exchange Model: XML, XSLT, NIEM.

### **Principal, Engagement Lead**

Number Six Software, Inc. (November 2003 – May 2007)

Services delivery manager assigned to guide clients in the application of software engineering practices to complete successful software development projects. Apply and direct knowledge of development processes, modeling, systems/software architecture, design, implementation, testing, and project teams.

Modernize, repair, and improve NATO Intelligence collection, analysis, and dissemination applications. Replace/implement structured and un-structured metadata and data management capabilities (Indexing, Search). Test-driven development and continuous product testing effort resulted in a zero-defect product that met all of its mission needs, and reversed a decades-long trend of defects and disuse. Windows, VB, .Net, SQL Server, DTS, SPARX, DODAF, UML, HP QualityCenter.

Lead the development of business process flows for driver and vehicle license and registration verification (BPEL, Web Services) for US Customs truck arrival processing. Install, configure and integrate business process engine with portal and application services: isolate and identify problems, recommend and implement solutions, and identify maintenance releases. Lead rapid engineering effort leveraging COTS from design to system integration test in eight weeks. WebSphere Business Modeler, Eclipse, RSA, MQ, DB2, AIX

Lead architect for engineering and development of business rules-based cargo screening application. Jump-start joint collaboration effort necessary for Government officials to formulate business rules (J2EE/JSP, ILog JRules). Provide technical expertise and guidance for functional and technical architectures, object-oriented design, EJB development, testing, and project and configuration management (Ant, Dimensions). Establish Enterprise Java coding guidelines and conduct code reviews.

### **Technical Consultant, Developer, Mentor**

Cyber Guild, Inc. (January 1994 – November 2003)

Work through SIGS Publications Object Magazine to help client accounts solve real business problems using distributed object computing. Consulting engineer engaged with early adopters of object technology to improve and deliver software development capability and organizations' capacity to deliver quality distributed applications.

Develop lightweight application server container using Java and CORBA: implement persistence mapping of POJOs, distributed transactions, session maintenance, resource pooling, and exception propagation for Semiconductor Fab facility material movement system. The resulting separation of concerns allowed 12-person team to develop industry-standards based application code and meet quality and schedule objectives. JBuilder, StarTeam, OrbixWeb, VisiBroker, Oracle, SQL, Java, Make, UML

Reverse-engineer, enhance and modernize suite of NATO logistics and stockpile planning applications. Capture C, PowerBuilder, and C++ components and code to high-level and detailed designs using OO and UML. Forward-engineer designs to code, implement, build, and test enhancements. Synchronize all high-level, detailed design documentation and tests with the implemented code. Rational ROSE, Watcom, Visual C++, Visual SourceSafe, SQL Server, TestDirector, WinRunner

Move securities trading system from C to C++; implement persistence mapping of C++ objects to Poet and ObjectStore databases. Implement C++ object initialization and serialization capabilities across project. Work with securities trading SMEs to refine object models and designs. UNIX, GCC, Emacs, Bash, Sed, Awk, Make, TCL/TK

Capture technical requirements for automated semi-conductor wire bonding assembly equipment.

Technology contributor to develop real-time system model for fire control system on-board US Marines Advanced Amphibious Vehicle; used ROSE Real-time (ObjectTime) to generate the implementation.

Deliver responsibility-driven design, object-oriented analysis and design, and object-oriented programming training and project-team consulting services to many clients. Client engagements include Java, J2EE, and C++ application development projects: UNIX, Windows, COM, CBuilder, Visual Café, and WebLogic.

Evaluate structure and architecture of software systems and applications to make management and project recommendations.

### **Senior Instructor and Consultant, Pre and Post-sales Product Support**

Interactive Development Environments (July 1990 – January 1994)

Deliver computer-aided software engineering education and project team consulting professional services and provide pre- and post-sales product technical support of company's suite of integrated software development environments for Ada, C and C++ application development.

Mentor for technology transition pilot programs: assess and recommend software development practices and tools and work within project development teams to implement applications. Deliver structured and object-oriented analysis & design methods and tools training. Conduct technical reviews of process, data and object-oriented models, designs, and Ada, C and C++ source code, and propose design alternatives. Integrate Software thru Pictures with tools developed by other vendors. Customize tools to support customer's development requirements, including Centerline C++, ClearCase and SUN. UNIX, C, Ada, C++, Oracle, Sybase, ERD, SQL, OOSD, CenterLine, ClearCase, Client-Server, Embedded/Real-time, Solaris, HP OpenView, OSF MOTIF/OpenLook.

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## *Education and Credentials*

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### **Degrees**

**MA**, Applied Mathematics, Ball State University

Studied advanced calculus, statistics, differential equations, assembly language programming, abstract algebra and topology. Presented dissertation: "A Qualitative and Quantitative Analysis of Nerve Axon Excitation Models"

**BS**, Mathematics and Urban & Regional Planning, Ball State University

Studied advanced calculus, differential equations, statistics and urban & regional planning.

National Honor Society and Indiana state academic scholarship recipient.

### **Certifications, Specialized Courses, and Workshops**

REST with Spring (2017)

ForgeRock OpenAM (2017)

Kubernetes (2017)

R (2017)

Docker (2016)

Certified Scrum Master (CSM) (2011)

HP uCMDB Certification (2012)

WebSphere Portal Server (2009)

WebSphere DataPower (2008)

Oracle BPEL Process Manager, ESB (2008)

ILog JRules (2004)

Rational ROSE Real-time (ObjectTime) (2003)

### **Clearances**

Meet(s) eligibility requirements for access to classified information (DOD, Public Trust/SF-86)

United States Citizen