

Matthew D. Fisher

Principal Systems Engineer
Progeny Systems, Manassas, VA

SUMMARY OF EXPERIENCE

Over fifteen years in software development ranging from embedded real-time device drivers to GUI-based applications with a strong emphasis on object-oriented analysis and design techniques. Adept in client/server, SOA, Semantic Web and distributed architectures for commercial and government clientele. Exceptional communication skills utilized in business development, customer demonstrations, sales briefings, recruiting and mentoring efforts. Eleven years of strong technical leadership and release management responsibilities over several full lifecycle development projects.

QUALIFICATIONS

- ▶ Extensive programming experience in
 - ▶ Java - J2EE, J2SE 1.4.2+, EJBs, Servlets, JavaBeans, JSPs, Web Portals, Applets
 - Eclipse 3.1+, BEA Weblogic Workshop 8.1, Sun netBeans 3.6+
 - ▶ C++ - Borland C++, Microsoft Visual C++
 - ▶ C - Green Hills MULTI, IRIX, GCC precompilers, compilers and linkers
 - ▶ Smalltalk - VisualWorks, ENVY/Developer
 - ▶ C# - .NET 2.0
- ▶ Object-Oriented Analysis and Design using Fusion, UML methodologies and design patterns
- ▶ Technical expertise in
 - ▶ Semantic Web (RDF(S), OWL, RDFa, SPARQL, POWDER, Jena, Sesame)
 - ▶ Web Technologies (HTML, XML, CSS, AJAX)
 - ▶ Configuration Management (ANT, ClearCase, ClearMake, dmake, PVCS)
 - ▶ Scripting (shell scripting, Lex, Yacc, Perl)
 - ▶ Additional Programming Languages (FORTRAN, BASIC, LISP, Scheme)
 - ▶ SQL
- ▶ Knowledgeable on real-time embedded systems (ENEAS OSE RTOS on PowerPC architecture) and desktop systems (Windows XP/Vista, Linux and Unix platforms)
- ▶ **Secret (since August 2006)**

WORK EXPERIENCE

Principal Systems Engineer *Progeny Systems ♦ Manassas, VA* *March 2008 – present*

- ▶ Managing the software lifecycle process, schedule and milestones for the current major release of the USW-DSS federated architecture (B2), enabling SOA communications based on an open architecture
- ▶ Principal Investigator for three Small Business Innovative Research (SBIR) efforts, Phase I and II
- ▶ Co-architected the creation of a real-time SOA stack, engineering several Data Distribution Service (DDS) implementations into the Enterprise Service Bus (ESB) of JBoss's SOA platform
- ▶ Writing Small Business Innovative Research (SBIR) proposals in the areas of the Semantic Web, SOAs and distributed data sharing

Senior Software Engineer *BBN ♦ Arlington, VA* *July 2005 – March 2008*

- ▶ Directed a \$2+ million Semantic Web Advanced Concept Technology Demonstration under DISA's Joint Force Projection initiative as principal investigator
- ▶ Led technical architecture team in development of Asio Scout, a modularized data federation tool suite based on Semantic Web technologies. Pioneering achievement that transformed the department's traditional model of custom solutions for individual clients. Responsible for obtaining initial commercial funding for Asio
- ▶ Instrumental in the procurement of over \$350,000 in customer funding.
- ▶ Regular contributor to *The Semantic Report*, a trade publication targeting semantic technologies and their users

Staff Scientist *JBISoft ♦ Fairfax, VA* *August 2004 – July 2005*

- ▶ Led redesign effort on C-IA COP (Coalition Information Assurance Common Operational Picture), a situational awareness tool for C2 COCOMs using J2EE and an EJB-based web portal
- ▶ Assisted development on the Java-based *iAgent* tool, a correlating, collaborating, knowledge gathering and semantic reasoning tool based on a distributed, SOA, pub/sub architecture
- ▶ Facilitated project demonstrations and authored proposals for senior executives of top-tier companies and government organizations

Engineering Manager *Tellabs ♦ Ashburn, VA* *October 2003 – August 2004*

- ▶ Supervised team of twelve developers with responsibility for personnel appraisals, task management/prioritization, technical documentation and code reviews
- ▶ Performed release manager functions for a major software release of the 5500 NGX product line. Responsibilities included leading a cross-functional team of over seventy developers through all phases of design, development and deployment. This release enhanced security and stability as well as expanded cross-connecting functionality to a multishelf arrangement, thereby increasing bandwidth capabilities eight-fold

Senior Member Tech Staff *Tellabs / Ocular Networks ♦ Reston, VA* *April 2000 – October 2003*

- ▶ Designed, developed and integrated the fundamental architecture for dynamic software installations and rollbacks of the 5500 NGX, which resulted in the submission of a U.S. patent
- ▶ Coordinated and ported entire code base of 400 modules to the latest versions of OSE RTOS
- ▶ Regulated and co-wrote common code subsystem which spanned seven different targets across two platforms (MPC8265, Windows) to consistently guarantee system integrity
- ▶ Involved with integration of Intel StrataFlash chips, from low-level device driver development to customization and incorporation of third-party FlashFX file system and proprietary PMD scheme

Team Leader *Bell Atlantic, Network Systems ♦ Arlington, VA* *June 1998 – April 2000*

- ▶ Engineered and deployed six Smalltalk projects allowing CLECs to utilize expressTRAK, a next-generation billing and provisioning system, aiding Bell Atlantic's entrance into the LD market
- ▶ Elected to an elite five-person team tasked with increasing productivity and usability of expressTRAK, resulting in a 15% reduction of average call handling time
- ▶ Chartered a Virtual Architecture Team to improve software quality and integrity
- ▶ Mentored new hires in proper Smalltalk development practices and design patterns

Software Engineer *Bell Atlantic, Network Systems ♦ Arlington, VA* *June 1997 – June 1998*

- ▶ Developed and designed several object-oriented software projects (supercedures, new service wizard) using Smalltalk for expressTRAK
- ▶ Created scenarios, use cases, object and data models and timeline diagrams using Fusion methodology for detailed functional design document

Software Engineer *Raytheon E-Systems ♦ Falls Church, VA* *June 1995 - June 1997*

Computer Programmer *Naval Research Laboratory ♦ Wash, DC* *February 1994 - August 1994*

EDUCATION

George Mason University, Fairfax, VA *January 2000*

M.S. Computer Science 3.83/4.0 GPA

The Pennsylvania State University, University Park, PA *May 1995*

B.S. Computer Science, Minor in Mathematics 3.66/4.0 GPA

George Mason University, Fairfax, VA *January 2000*

Certification in Software Systems Engineering

SELECT BOOKS, PUBLICATIONS AND PRESENTATIONS

J. Hebler, M. Fisher, R. Blace, A. Perez-Lopez. *Semantic Web Programming*, Indianapolis: Wiley & Sons, 2009.

M. Fisher. "ONR/PEO IWS/PEO C4I Combat System (CS)/Command and Control (C2) Limited Test Experiment (LTE) and Results: A SOA Success Story", Joint Undersea Warfare Technology Conference, San Diego, CA. March 2011.

M. Fisher, J. Hebler. "The Power of POWDER", Semantic Technology Conference, San Francisco, CA. June 2010.

J. Hebler, M. Fisher. "The 10 Myths of the Semantic Web Debunked", Semantic Technology Conference, San Francisco, CA. June 2010.

M. Fisher, T. Burns, N. Keapproth. "An Approach for Establishing and Managing Strike and Battle Group Compositions across Disconnected, Intermittent and Limited (DIL) Naval Networks", Joint Undersea Warfare Technology Conference, San Diego, CA. March 2010.

J. Hebler, M. Fisher. "Semantic Web Programming", JavaOne Conference, San Francisco, CA. June 2009.

M. Fisher, M. Dean, G. Joiner. "Use of OWL and SWRL for Semantic Relational Database Translation", OWL: Experiences and Directions (OWLED2008), Washington, DC. April 2008.

M. Fisher, "Applying Semantic Web Technologies Toward a Net-Centric Data Strategy", Invited Speaker, Data Management Association National Capital Region workshop, Washington D.C. January 2008.

M. Fisher, M. Dean. "Automapper: Relational Database Semantic Translation using OWL and SWRL", IASK E-Activity and Leading Technologies 2007 (E-ALT07), Porto, Portugal. December 2007.

M. Fisher, M. Dean. "Semantic Query: Solving the Needs of a Net-Centric Data Sharing Environment", 2007 Semantic Technology Conference, San Jose, CA. May, 2007.

M. Fisher. "Eliminating Information Overload and Employing Event Reasoning", White Paper, JBISoft Inc., February, 2005.

CONFERENCE COMMITTEES

Industry Track Co-Chair, 8th International Semantic Web Conference, Washington, D.C., 2009

Exhibition Track Co-Chair, 8th International Semantic Web Conference, Washington, D.C., 2009

PROFESSIONAL SOCIETIES

Senior Member, IEEE and IEEE Computer Society

Senior Member, Association for Computing Machinery

HONORS

US Navy Letter of Appreciation, 2011

Excellence Award, Navy Limited Technology Experiment, 2010

Achievement Award, Progeny Systems, 2009

Excellence Award, Bell Atlantic, 2000

Howard Hughes Scholar, 1990

Silver Congressional Award, 1990

Bronze Congressional Award, 1989