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Experience

LOCKHEED MARTIN

OWEGO, NEW YORK

2012-2016

System Architect Principal, Technical Operations

- LM Master Architect, the highest possible rating awarded to technical personnel for technical, business, and leadership achievement (since 2000)
- LM Fellow, the highest possible rating awarded to technical personnel for technical expertise (2012-2014)
- Chair, LM Corporate Engineering & Technology Joint Architecture Working Group (2012-2016) leading collaboration of systems architecture and systems engineering best practices and lessons learned across the LM corporation
- Chair of multiple LM technical professional programs (2003-2016) with the mission to identify, grow, and recognize key technical leaders. Championed initiatives that increased the development and qualification of technical leadership professionals in Owego by over 500% in 4 years. Established criteria for systems and software professionals in a division of LM, and selected as first leader of the new LM-wide corporate program (since April 2011)
- Lead, Small Business Innovative Research (SBIR) Program, responsible for business development with small companies who perform leading-edge research a diverse range of innovative technologies with Department of Defense agencies. Built business from zero to over \$700k in three years, approximately triple expected growth targets for the business area
- One of first persons to pass the IEEE Certified Software Development Professional (CSDP) examination, the only recognized world-wide standard for assessing and certifying the expertise of software development professionals (since 16May2001)
- Recognized as the world's foremost authority on Software Reuse measurement and business case analysis, cited well over 1000 times according to Google Scholar
- Awarded sixteen patents.

2010-2011

Systems Architect Principal, Technical Operations

- System Architect, Consolidated Afloat Core Services (CANES) (Oct 2010-Nov 2011), responsible for documentation and delivery of a \$20m+ LM system design contract leading to submission of a corporate focus proposal for a production contract. Received LM Special Recognition Award (SRA) for leading preparation for the 2-day Critical Design Review (CDR) with the Navy customer
- Member, Advanced Projects, responsible for technical business development of a diverse range of innovative technologies with Department of Defense research agencies and technology labs
- Member, LM Corporate Engineering & Technology Joint Architecture Working Group (2008-present) working to enhance collaboration of systems architecture and systems engineering best practices and lessons learned across the corporation, focusing on developing a corporate Architect Development and Qualification program.

2006-2009

Chief Engineer, Technical Operations

- Chief Engineer (2008-2010) for Land Vehicle Systems programs, responsible for technical leadership and business development in a nascent business area targeting the development and production of tactical wheeled vehicle solutions for the U.S. and international armed forces. Led requirements specification for a new tactical vehicle, to include authoring the system description and technically controlling all prototype and baseline configurations.
- System Engineering Integrated Product Team Lead (2006-2008) for the \$1.7 billion U.S. Presidential Helicopter Replacement Program, responsible for technical leadership and coordination of all System Engineering activities across numerous disciplines such as air vehicle, avionics, supportability, and program management. Developed operational analysis, functional analysis, and the systems engineering method for Increment 2 of the VH-71 program.
- Technical Advisory Board, LogicLibrary (2003-2008). Actively engaged in business development and the technical activities of a start-up company recognized as the leading innovator in tools for Service Oriented Architecture (SOA) deployment and governance. Personally contributed to several major contract wins by tailoring processes to client needs.
- Prolific writer and speaker at internal seminars, conferences, and universities on subjects ranging from Systems and Software Architecture, Software Metrics and Business Analysis,

Object-Oriented Database Systems, and Web Architectures.

- 2001-2006 **System Architect, Distribution Technologies**
- Chief Engineer (2005-2006) and senior technical leader for the ~\$200 million (annual) Distribution Technologies (DT) Business Area. Responsible for technical oversight and strategic direction for DT programs, to include prioritization and management of R&D activities. Extensive history as the Chief Architect and technical leader on large development programs for DoD and postal services. Successfully managed all tasks within budgets.
 - Chief Architect (2004-2005) for the \$200 million Universal Computer Connectivity (UCC) program to provide integrated voice, data, and other telecommunications services to the U.S. Postal Service, primarily responsible for developing the supporting computer systems and procedures for ordering, billing, customer care, and network management. Developed and directed Systems Engineering activities for the program, which were generally acclaimed as the “most well run and established procedures on the contract.”
 - Chief Architect (2001-2004) for the \$210 million United Kingdom Address Interpretation (AI) project to provide automatic postal address resolution for the entire U.K. The system is the most sophisticated national mail processing solution in the world, successfully sorting approximately 40 million pieces of mail per day with extraordinary automatic read rates. In addition, led business development and the technical solution for several AI contract enhancements totaling \$45 million and a contract extension totaling \$125 million.
 - Research director for the Distribution Technologies Business Area, managing and applying Research and Development funding in support of a \$600 million strategic business plan.
 - Recognized for outstanding technical contributions at 2003 Lockheed Martin “Honors Night.”
- 2000-2001 **System Architect, Industrial Modernization**
- System Architect, responsible for application development and research for a large-scale Oracle *Ili* Applications-based business modernization contract for a commercial customer. Working with the Customer, jointly developed and successfully presented a Concept of Operations for a technical solution to executive management.
- 2000-2000 **ATLAS COMMERCE** **ENDICOTT, NEW YORK**
Chief Technical Officer
- Responsible for technical strategy and business development in a Business-to-Business Internet Commerce Company undergoing exponential growth in a dynamic market.
- 1998-2000 **LOCKHEED MARTIN / LORAL / INTERNATIONAL BUSINESS MACHINES** **OWEGO, NEW YORK**
FEDERAL SYSTEMS
System Architect, Postal Software Development/Products
- Appointed Chief System Architect for Address Interpretation Product Development to produce automatic address resolution and information technology solutions for postal services worldwide, beginning with a \$210 million (base price) system for the United Kingdom Royal Mail. Key member of the leadership team leading to the contract win.
- 1996-1998 **Senior Software Engineer, Advanced Technology Group**
- Appointed Chief Systems Architect on numerous corporate proposals and projects, to include major domestic and international Postal Service contracts, Air Force and Navy programs. Duties included business development, requirements definition, cost estimation, proposal preparation, task order management, subcontractor management, and responsibility for the design of detailed, large-scale (\$100+ million) integrated computer systems solutions.
 - Awarded Lockheed Martin “Federal Systems Architect” qualification.
 - Led a 6-month Systems Architecture study and analysis of 9 of Lockheed Martin’s largest Command and Control contracts.
 - Hand picked to assist the Chief Scientist of Lockheed Martin Federal Systems with system architecture issues and major program reviews.
 - Published book titled Measuring Software Reuse with Addison-Wesley, currently recognized as the landmark work on reuse business case and Return-on-Investment (ROI) analysis.
 - Served as Principal Investigator for \$550k of Defense Information Infrastructure (DII) Common Operating Environment (COE) and distributed database research.
 - Elected Senior Member of the IEEE.

- Over 90 technical publications in premier conference proceedings and professional journals.

- 1995-1996 **Chief Software Architect, U.S. Army Sustaining Base Information Services (SBIS)**
- Responsible for the technical direction of application software development on a \$474 million Management Information System (MIS).
 - Planned and implemented immediate technical solutions to meet new and challenging customer requirements in a high pressure, schedule-driven, and resource-constrained environment.

- 1994-1995 **Principal Investigator, Advanced Technology Group**
- Technical lead for 10 UNIX, networking, and software development Independent Research and Development (IR&D) projects totaling \$1.4 million over 15 months. Successfully completed all projects while managing resources to within 99.5% of budget.
 - Designed and implemented the internal World-Wide-Web (WWW) for the Owego site. Served as the first Webmaster for LM- Owego.
 - Architect and contract manager for the Loral Federal Systems reuse program. Developed and published a paper on the world's first WWW-based reuse repository and turned the internal tool into a commercial product. This tool cost less than 1% of the original developed by IBM.
 - Delivery Order Manager for a \$2.4 million software reuse contract with the U.S. Army.
 - Principal Investigator on information retrieval methods and object-oriented frameworks.

- 1993-1994 **Lead, Integrated Software Engineering Environment, Open Systems Development Group**
- Authored and co-implemented the SBIS Software Reuse Strategy, resulting in SBIS exceeding initial reuse goals by over 30%.

INTERNATIONAL BUSINESS MACHINES

ENTERPRISE SYSTEMS DIVISION

POUGHKEEPSIE, NEW YORK

- 1991-1993 **Advisory Programmer, IBM Reuse Technology Support Center**

- Responsible for corporate reuse standards and measurements.
- Developed the IBM software reuse metrics and return on investment model.
- Edited, wrote, and published the entire library of resources on the IBM Reuse Method.

UNITED STATES ARMY

TRAINING AND DOCTRINE COMMAND

FORT MONROE, VIRGINIA

- 1989-1991 **Decision Support Systems Officer**

- Served as a primary information systems advisor to the senior management and staff of a 150,000 person organization.
- Implemented a successful decision support system for senior management.
- Designed a national advertising and fulfillment system for the U.S. ROTC.
- Performed economic and performance analysis on computer systems at all business levels.
- Awarded the Army Meritorious Service Medal.

Education

RENSSELAER POLYTECHNIC INSTITUTE

TROY, NEW YORK

- 1985-1989 **Hertz Foundation Fellow**

- Awarded full scholarship for original advanced study in the applied sciences.

Earned Doctor of Philosophy in Computer Science

- Published dissertation on object-oriented CAD database support of software reuse.
- Developed prototype CASE environment for high-performance workstations.
- Selected full member of the Sigma Xi Science Research Society.

Earned Master of Science in Computer Science

- Master's Project on software complexity metrics selected for use in the software engineering curriculum.
- Elected to the Pi Mu Epsilon Computer Science Honor Society.

UNITED STATES MILITARY ACADEMY

WEST POINT, NEW YORK

- 1978-1982 **Earned Bachelor of Science with Concentration in Computer Science**

- Superintendent's List (top 5% in overall class standing), Commandant's List for leadership

excellence, Dean's List for academic excellence.

- Class Rank 10/862.
- Selected for Brigade Athletic Officer, one of the top 12 leadership positions at USMA.
- Selected State Finalist in the Rhodes Scholarship Competition.
- Elected to the Phi Kappa Phi Honor Society.

Leadership

1ST BATTALION, 509TH INFANTRY REGIMENT

AIRBORNE COMBAT TEAM

VICENZA, ITALY

1985

Assistant Battalion Operations Officer

- Assisted in the planning and training of an elite airborne infantry battalion assigned as the United States component of the NATO Quick Reaction Force.
- Awarded the Army Commendation Medal, Master Parachutist Badge, and Expert Infantryman Badge.

1984-1985

Reconnaissance Platoon Leader

- Selected to lead the combat team's independent intelligence gathering force of 18 men.
- Commanded units during numerous NATO special warfare schools and exercises (e.g., ranger, commando, airborne, etc.).

1983-1984

Infantry Platoon Leader

- Trained and led 42 men in extended, realistic military training.
- Broke the course record at a two-week Special Forces combat readiness evaluation.
- Honor graduate, Army Ranger School (4/160). Distinguished graduate, Free Fall Parachute School (2/24). Commandant's list, Infantry Officer Basic Course (top 20%).

Professional

1989-present

- Senior Member of the IEEE (since 1997).
- Served on the program committees and presented on panels of over 25 professional conferences.
- *Tool/Demo Chair*, Eleventh International Conference on Software Reuse (ICSR'11), 2011.
- *Tutorial Chair*, Tenth International Conference on Software Reuse (ICSR'10), 2008.
- *General Chair*, Ninth International Workshop on Software Reuse (WISR'9), 1999.
- *Program Chair*, Fifth IEEE International Conference on Software Reuse (ICSR'5), 1998.
- *Program Co-Chair*, Lockheed Martin Reuse Symposium (LM-Reuse'97), 1997.
- *Publicity Chair*, ACM SIGSOFT Symposium on Software Reusability (SSR'97), 1997.
- *Tutorial Chair*, Fourth IEEE International Conference on Software Reuse (ICSR'4), 1996.
- *Program Chair*, Department of Defense Domain Scoping Workshop, 1995.
- *General Chair*, Sixth Annual IEEE Workshop on Software Reuse (WISR'6), 1993.
- *Vice-Chair*, IEEE Computer Society Mid-Hudson Valley Section, 1992-1993.
- Designed and taught a course on the analysis of computer algorithms at Christopher Newport College, Newport News, VA, 1991.
- Consulted on software engineering issues for REMSA, Inc., Hampton, VA, 1990-1991.
- Enhanced testing software for Augusta Area Technical Institute, Augusta, GA, 1989.
- Active in university relations (e.g., with RPI, USMA, Binghamton University, Cornell, etc.)
- Member of the IEEE Computer Society (since 1988), Association for Computing Machinery (since 1987), and Mensa (since 1981).
- Cleared for Top Secret information and granted access to Sensitive Compartmented Information based on a Single Scope Background Investigation completed in August 2000.

Foreign Languages

Con conversationally fluent in Italian, with a working knowledge of French.