Michael I Schwartz

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SUMMARY

Extensive hands-on experience in systems and software engineering with emphasis on development methods and tools, incorporating new technology, and mathematical techniques. Technical excellence in multi-language development, software concepts, design, development, and growing successful teams.

Succeeded in both mission critical applications with severe time constraints and research and development projects with technology insertion goals.

Mentored many technical contributors, especially advanced developers and architects, to the lead roles on development teams, to make their own contributions to these applications, and future applications.

Successfully developed and led groups in learning and applying design and implementation techniques, and transitions these courses into a sustainment phase.

Focus on team building, mentoring, current and emerging technology insertion, and new business opportunities.

CAPABILITIES AND ACHIEVEMENTS

Led system design, software design, and implementation teams in completing multiple successful projects. Succeeded in both mission critical applications with severe time constraints and research and development projects with technology insertion goals. Mentored technical contributors, especially advanced developers and architects, to make their own contributions to these applications, and future applications.

Expert consultant, mentor, and implementer for UNIX/Linux, C, C++, scripting languages, cloud and big data solutions. Conversant with Java, JavaScript, and multiple SCM solutions.

Designed and implemented software products and interfaces, and integrated hardware and software. Experience ranges from systems and software concepts, to architecture, to detailed design, and to device driver implementation.

Designed and implemented technology transfer courses and products for Lockheed Martin projects, including applying object-oriented techniques, systems and software engineering techniques, and cloud computing. Designed and taught graduate level courses in many computing-related topics for the University of Denver.

EMPLOYMENT OVERVIEW

Schwartz Computer Consulting Services
402 South Ivy St., Denver, Colorado 80224
1984 — Present
Created and continue to run a custom software and training firm.

University of Denver
2211 S. Josephine, Denver, Colorado, 80208
1984—Present

University College Instructor *(1984-present)*
Developed and delivered both course design and implementation for many of the University College courses, including C++, Operating system design, and Object-oriented analysis and design. Proposed and offered

object-oriented analysis and design as seminars prior to their adoption into the curriculum.

Taught many University College courses, including JavaScript, Distributed Computing (including Amazon Web Service-enabled applications), Java, XML Applications, Database (4-level series), C++ (2-level series), C, OOA/OOD, UNIX (including internals) courses. Delivered both online and classroom teaching. Highly rated by students.

Also taught Software Engineering II for the University of Denver Computer Science Department Masters Program. Guest lecturer on the origins and development of cloud computing, and likely future trends. Participant and table discussion lead in the 2016 "Unconference".

Brought on board by Don King and Peter Warren.

Lockheed Martin

PO Box 179, Denver Colorado 80201

1981 — 2015 (retired)

Overview

In addition to the specific positions mentioned below, my Lockheed Martin career has been marked by a focus on innovation in integrating new technologies, as a chief scientist and a system and software architect. I have been a frequent participant in design adequacy assessments, and many other broad corporate initiatives that require someone who can communicate well, and is not afraid to take risks, overcome obstacles, and work across organizational boundaries and through organizational challenges. My work history has shown the results of a commitment to creating a technical path for career advancement and enabling it for others.

Lockheed Martin Fellow *(2008-2015),* Lockheed Martin Fellow Emeritus (*2016+*)

My contributions over my Lockheed Martin career resulted in my being nominated and promoted as a Lockheed Martin Fellow. This designation provided opportunities to take on technical leadership roles to wide variety of new business pursuits, as well as mentoring and technical support to continuing projects. Areas of focus included applying cloud computing, developing "big data" infrastructure and analytics across the corporation, participating in development of technology roadmaps, evolutionary roadmaps, innovation, and information management strategies, including information assurance. Work in these areas successfully aligned multiple-business area efforts and corporate investment strategy.

Information Systems Architecture Lead, Steering Committee Member, Council (2001-2015)

I qualified, mentored, and credentialed senior systems and software architects and technical leads over many programs and business areas, including overseas locations. I credentialed well over 100 architects, led seminars, created courses, and actively guided discussions on architectural approaches and techniques to transfer skills and lessons learned among business areas and geographic locations.

Special Assignment: Applying Map-Reduce Techniques to Space Telemetry (2012-2015)

Applied Hadoop and other big data technologies to improving integration, verification, and test environment for the NASA Orion Multi-purpose Crew Vehicle development. Demonstrated through model, design, and implementation the expected improvements in telemetry analysis processes. Achieved a standard product that is moving to production across 3 business areas, 4 types of spacecraft through my mentees in this area.

Other Special Assignments included those requiring refocusing of team energies, developing an esprit-de-core, maturing design and development approaches of the participants, and selecting research and development focuses. These assignments included:

- Special Assignment: Geoscout-related New Business Opportunities (2008-2012)
- Special Assignment: Integrated Mission Management (2006, 2009-2012)
- Special Assignments: Proposals and Reviews (Volume lead, Review lead)

Prior to being named a Fellow, I successfully completed a number of challenging assignments, in which I learned how to manage subcontractors, interact with Government customers, write winning proposals, design innovative solutions, establish beneficial partnerships, and build coherent teams:

- Space Radar Chief Software, Ground, and User Architect (2003 – 2008)
- Senior Manager (1997-1999, 2002-2008)
- All Source Analysis System (ASAS): Block I support and Block II leadership (1989-1995, subsequent consulting): Design and construct the Army's Intelligence System.
- Methodology Development: Introduction of Object Oriented Analysis and Design, Agile Practices: Needed to ensure success of a multi-billion dollar Air Force modernization project.
- JIES (1987-1990): Telecommunications standardization and testing
- OBSS (1984-1987): Real-time data conferencing for distributed shift change. Successfully transitioned from $250K study to over $10M business. Key in winning a multi-billion dollar related contract.
- Research and Development: Successfully developed new and innovative software skills, algorithms, and applications enabling capabilities which differentiated Lockheed Martin from its competitors.

Brought on board by Tom Connelly, Terry Lasky, and Robert Knickerbocker.

EDUCATION

University of Colorado, Boulder, Colorado
1983-1984 Postgraduate studies
Michigan State University, East Lansing, Michigan
1978-1981 Received M.S. Mathematics in May 1980
Case Western Reserve University, Cleveland, Ohio
1972-1978 Received B.S. Mathematics in June, 1976

ORGANIZATIONS

USENIX, since 1981

OTHER FACTS

OPERATING SYSTEMS:
Many flavors of Unix

SOFTWARE LANGUAGES:
C, C++. Java, JavaScript. Released several popular Tcl/Tk extensions.

AWARDS:
- Lockheed Martin Fellow, 2008-2015. Granted Fellow Emeritus status.
- Three patent application awards, 2002-2003; Patents 7,165,060, 7,437,408, 7,809,791
- Management and Data Systems Information System Architect certification, 2001; Information Systems and Global Services Information Systems Architect renewal as advanced architect, 2012
- Inventor of the Year Award, 2001
- Intellectual Property Special Award, 2000
- Employee Commendation, 1985, 1987, 1993, 1994, 1997, 1998, 2003, 2004, 2007
- Promotions, 1985, 1988, 1991, 1997, Fellowship
- Peer Awards 1993, 2001, 2003, 2010, 2013

- US Army Commendation, 1998, including first Army system to meet COE Level 6 requirements.
- Project Special Incentive Awards, 1993, 1994, 2004, 2008
- Corporate Technical Achievement Award, 1995, 1997

PUBLICATIONS:

Series on Big Data and Space Telemetry for Orion MPCV (2013-2015), Building a Build Plan (2012, with Dolores Gallus), Cloud Computing Overview (2012), User Stories and Abuser Stories For Nonfunctional Requirements (2009, with Dottie Acton), Tsunami Software Infrastructure (2000, with Kurt Heddleston), Use of Enabling Techniques Leveraging COTS To Provide Rapid Insertion and Migratory Integration in the All Source Analysis System (1997, with LTC Mike Hainline), Ada Implementation of Operating System Dependent Features (1986, with Randall Hay), plus over 100 published internal technical memoranda.

CLEARANCE: Inactive since retirement from Lockheed Martin. Last SSBI date: 7/8/2013.