DAVID K. MCKEAN

Labor Category: Chief Technology Officer
Security Clearance: Top Secret/SCI
Current Employer: Advanced Fusion Technologies, LLC
Education/Training: BS, Electrical Engineering, California State University Long Beach, 1978

Summary:

David K. McKean has 33 years of experience with expertise in the fields of Technical Management and Software and Systems Engineering almost exclusively in US Navy-related systems. He has extensive experience in software development, systems engineering, COTS selection, custom HW and SW design and development, systems integration and test, as well as full life-cycle DoD program development. He is fluent in both the Navy Advanced Processing Build (APB) and Technology Insertion (TI) processes for rapid capability insertion.

Mr. McKean is currently the Chief Technology Officer for AFT. In this capacity, he is responsible for overall technical direction on AFT's major projects. He is uniquely qualified to design & manage the development of projects applicable to SEAPORT.

2007-Present Advanced Fusion Technologies, LLC

- *Chief Technology Officer:* Responsible for technical definition and oversight of all AFT LLC product and service offerings. Inventor for "Method and System for Enhanced Interconnectivity in Vessel Computers" patent pending, docket number 030898-00001, also known as Open System Interface Converter (OSIC). Perform reverse engineering of application source code (Java, C/C++) into a Model-Driven Architecture (MDA) representation that includes UML structural (Class, Component), behavioral viewpoint (Sequence, State), and functional (Use Case, Activity) diagrams.

2003-2007 General Dynamics AIS

- *Chief Engineer:* Responsible for defining and incorporating software technologies that introduce Open Architecture (OA) into GDAIS Surface Warfare offerings including the Command and Control element of the AEGIS Weapon System, Navy Open Architecture Track Manager (OATM), E-2C Operational Flight Program (OFP), and Littoral Combat Ship (LCS) Core Mission System. Reviewed and coordinated Internal Research and Development (IRAD) projects pertaining to Open Architecture and Model Driven Architecture.
- *Chief Architect:* Technical proposal lead for GDAIS OATM offering. GDAIS awarded contract in March 2005. Responsible for development of OATM project technical master schedule. Responsible for definition of OATM project technical objectives and architecture. Define technical approach for the integration of multiple applications developed using Model Driven Architecture and executable UML.
- *Software Architect:* Responsible for defining a software architectural framework using Navy Open Architecture Computing Environment (OACE) compliant publish-subscribe distribution middleware, operating system, and computer resource infrastructure to facilitate the integration of the Navy OATM and other OA components. Developed a component-based MDA using executable UML for designated legacy HE2K OFP software components using "agile" Model-Driven Development (MDD) process that was functionally validated in the E-2C Test and Evaluation Laboratory (ESTEL). The model architecture was developed to define component interface definitions at both Platform Independent (i.e. data definition) and Platform Specific

(i.e. data transport) levels. The HE2K OFP effort also explored quantification of the reduced test costs using the MDA and explored techniques to perform Production-level unit and integration tests using a MDD life cycle model.

2003-2003 Science Applications International Corporation

- *MH-60S Armed Helicopter System Architect:* Architected and specified the MH-60S Armed Helicopter System (software and hardware) for Offensive Subsystem (Sensors, Weapons, Avionics) and Defensive Subsystem (Missile Radar Warning, Laser Detect, Chaff/Flare Dispense).
- *Sikorsky (S-70 and S-92) Stores Management Upgrade Proposal, Program Manager:* Developed proposed Stores Management System architecture (software and hardware). Developed process to specify, design, develop, integrate, and test the proposed safety critical system.

2000 – 2003 ORC, Inc.

- *MH-60R Stores and Self-Defense (SAS) Programmable Interface Unit (PIU) Chief Engineer:* Specified and architected the MH-60R SAS PIU stores management subsystem (software and hardware). Software Project Manager responsible for planning/executing spiral software development process driven by risk identification, assessment, and mitigation. Software architect for PIU software developed using Cradle (ThreeSL) software development tool. Developed of real-time, safety-critical design patterns for PIU software. Performed safety engineering tasks such as hazard, fault tree, and software safety analyst. Prepared PIU safety data package including Safety Assessment Report. Participated in Software System Safety Technical Review Panel and Weapon System Explosive Safety Review Board. Conducted Software Process Assessment to determine CMM process level for the organization.

1994–2000, NAVAL AVIONICS CENTER, LLD DESIGN INC., ORC, INC.

- *H-60 Armed Helicopter System (FLIR/Hellfire Air-To-Ground Missile Integration) System and Software Architect:* Architect, specify functional/performance requirements, specify interfaces, and allocate requirements to system components (software and hardware). Program executed in three evolutionary phases across two platform variants (SH-60B, HH-60H) with common armament system to add increasing capability. Member Software Engineering Process Group (SEPG) responsible for Software Engineering Institute (SEI) Capability Maturity Model (CMM) process definition. Trained and conducted Software Process Assessment to determine CMM process level for the software engineering organization. Master scheduler responsible for placing 200+ software engineer's on 32 programs as a member of the Software Engineering Competency Center management team.

1988–1993, Naval Avionics Center- Information Available Upon Request

1987–1988, AT&T Bell Laboratories- Information Available Upon Request

1978–1987, Hughes Aircraft Company- Information Available Upon Request