

DAVID BAILEY

ASSOCIATE, DAYTON AEROSPACE, INC.

PROFILE

Over 30 years of experience working in air vehicle subsystems, flight systems, and integration engineering, including roles as the F-117 chief integration engineer, Global Hawk lead flight systems engineer, and Advanced Cruise Missile (ACM) lead subsystems engineer. Experience includes a wide range of programs including B-1, B-2, ACM, Air-Launched Cruise Missile (ALCM) and B-52. Served as technical expert on Executive Independent Review Teams (EIRTs) for the B-1A, Joint Surveillance Target Attack Radar System (JSTARS), F-22, DarkStar and Joint Unmanned Combat Air System (JUCAS). Specialized expertise in MIL-HDBK-516-based military airworthiness certification, supporting both government and industry organizations. GS-14, Department of the Air Force (DAF) (Retired).

PRINCIPAL AREAS OF EXPERTISE

Military Airworthiness Certification

Developed MIL-HDBK-516 certification training materials delivered to both government and industry teams. Ensured major structural modification of the Missile Defense Agency's (MDA) Wide-body Airborne Sensor Platform (WASP) aircraft met airworthiness requirements. Evaluated the proposed STANAG 4671, *Unmanned Air Vehicle (UAV) Systems Airworthiness Requirements (USAR)*, and compared it with MIL-HDBK-516B, *Airworthiness Certification Criteria*, to determine how well the handbook captured the content of the STANAG and identify any additions required for the Air Force Life Cycle Management Center Engineering Directorate (AFLCMC/EZ, formerly ASC/EN).

Operational Safety, Suitability, and Effectiveness (OSS&E)

Evaluated numerous F-117A modifications proposed by Lockheed-Martin and the 49th Flight Wing of the chief flight systems engineer. Ensured modifications were airworthy and met system safety requirements.

Systems Engineering

Developed F-117A follow-on total support systems partnership (TSSP) contract statement of work (SOW) and re-baselined requirements following release of PBD 720 which retired the fleet. Performed detailed fact-finding for the \$500M TSSP II performance based logistics (PBL) contract. Led the Global Hawk pre-engineering manufacturing development (EMD) requirements definition, SOW generation and coordination, basis of estimate (BOE) evaluation, and pre-contract negotiation meetings. Negotiated Global Hawk ORD requirements, objectives, and thresholds with ACC/AC2ISRC and Northrop Grumman.

Air Vehicle Subsystems Engineering

Formed and headed a fuel bladder leak Tiger Team consisting of members from EN, Air Force Research Laboratory (AFRL), USAF Rocket Laboratory, and the US Army (USA) that determined ACM fuel leak's root cause and generated a recovery plan to support restarting the production line. Created and led a second fuel leak Tiger Team of EN and AFRL members that established the root cause and subsequent surface Radar Absorbing Material (RAM) separation and developed manufacturing improvements for both the prime and dual-source contractors to prevent future fuel leaks.



DAYTON AEROSPACE

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EDUCATION

MS, Aerospace Engineering
University of Dayton

BS, Aerospace Engineering
Penn State University

KEY POSITIONS

Senior Systems Engineer
MacAulay Brown

Supervisory Integration Engineer
F-117 Systems Squadron

Chief Flight Systems Engineer
F-117 Program

**Lead Flight Systems and Chief
Systems Integration Engineer**
Global Hawk Program

CERTIFICATIONS

APDP Level III
Systems Planning, Research,
Development & Engineering

APDP Level II
Test & Evaluation

APDP Level I
Program Management

WORK HISTORY

Associate | Dayton Aerospace, Inc.

2015-present, Dayton, OH

Provide technical and program management support to government and industry organizations in the defense acquisition arena, including specialized expertise in flight systems, air vehicle subsystems, and airworthiness certification.

Senior Systems Engineer | MacAulay Brown

2007-2013, Dayton, OH

Provided engineering support for various airworthiness projects. Performed comparison of proposed STANAG 4671, *UAV Systems Airworthiness Requirements (USAR)*, with MIL-HDBK-516B, *Airworthiness Certification Criteria*, to determine how well the handbook captured the content of the STANAG and identify any additions required for AFLCMC/EZ (formerly ASC/EN). Performed pre-development analyses of an airborne communications jamming pod for AFLCMC/XP (formerly ASC/XR). Developed a systems engineering case study of the T-6A Texan II program for the Air Force Institute of Technology (AFIT) School of Systems Engineering which identified systems engineering issues resulting from the commercial-off-the-shelf (COTS) procurement. Under contract to Dayton Aerospace, developed subsystems training material for a comprehensive military airworthiness certification training program for a foreign military customer.

Supervisory Systems Engineer/Chief Flight Systems Engineer | F-117 Systems Squadron

2002-2007, WPAFB, OH

Held supervisory responsibilities for systems safety, armament integration, and environmental management. Owned technical responsibility for all aspects of flight systems engineering (structure, propulsion, flight controls, hydraulics, fuel systems, landing gear, etc.) for the F-117 Stealth Fighter Program. This required identifying, planning, and managing flight systems engineering support from AFLCMC/EZ-EN (formerly ASC/EN) and coordinating taskings with Lockheed Martin Aeronautics, who provided sustaining engineering support under the TSSP PBL contract. Developed follow-on TSSP contract SOW and re-baselined requirements following release of PBD 720 which retired the fleet. Performed detailed fact-finding for the \$500M TSSP II PBL contract. Major responsibilities included airworthiness, OSS&E baseline maintenance, sustaining engineering, tech order maintenance, and support of propulsion engineering, subsystems, structures and ASIP, and crew stations engineering. Acquired EN flight technology technical advisor expertise to evaluate and release a quick reaction capability (QRC) just hours prior to utilizing the capability for the first strike of Operation Iraqi Freedom

Chief Systems Integration Engineer/Lead Flight Systems Engineer | Global Hawk System Program Office

2000-2005, WPAFB, OH

Lead engineer for the Global Hawk Pre-EMD contract. Tasks included SOW generation and coordination, BOE evaluation, and pre-contract negotiation meetings. Negotiated Global Hawk ORD requirements, objectives, and thresholds with ACC/AC2ISRC and Northrop Grumman. Served as the flight systems technical expert for the Unmanned Combat Air Vehicle (UCAV) First Flight Readiness Review EIRT and received Meritorious Civilian Service Award for technical work in unmanned air vehicles (UAVs). In the course of Global Hawk deployment during Operation Enduring Freedom, temporarily detailed to lead flight systems engineer. In Germany, acted as the program office representative to the 12th Expeditionary Reconnaissance Squadron (12th ERS) for 60 days and provided on site program office interface with the 12th ERS commander, contractor, and the program office. Developed technical expert status justifications of deployed contractor personnel for the German Government. Interfaced with Combined Air Operations Center (CAOC) to coordinate Global Hawk Air Tasking Order (ATO) mission plan targets with contractor mission planners. Monitored Global Hawk reconnaissance flights over Afghanistan and provided program leadership mission feedback. Provided Global Hawk airframe status to the 12th ERS commander based on communications with personnel at the classified launch and recovery location. As a first-level supervisor, performed performance appraisals for system safety, configuration management, and manufacturing civilian personnel assigned to the Global Hawk program office.

Prior to 2000

- Lead Flight Systems Engineer, High Altitude UAV, WPAFB, OH
- Environmental/Thermal Control Systems Technical Specialist, ASC/EN, WPAFB, OH
- Lead Flight Equipment Engineer, ACM, WPAFB, OH
- Environmental/Thermal Control Systems Engineer, B-2, WPAFB, OH

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KEY PROJECTS

- Provided airworthiness support to major contractor on the Missile Defense Agency (MDA) Wide-body Airborne Sensor Platform (WASP) project.
- Developed comprehensive systems engineering case study of the T-6A Texan II for AFIT School of Systems Engineering.
- Developed subsystems airworthiness training materials as part of a comprehensive airworthiness training program for the Republic of Korea Defense Acquisition Procurement Administration (DAPA).