

BUTCH ARDIS

ASSOCIATE, DAYTON AEROSPACE, INC.

PROFILE

Over 40 years of operational US Air Force (USAF) and systems engineering acquisition experience, including over 10 years as a consultant to industry, US government, and allied countries. As former chief avionics architect for the USAF, established avionics systems architecture policy, processes, practices, and procedures for application in the acquisition of aeronautical weapon systems. Extensive systems engineering and management experience in areas ranging from intelligence to low observables to airborne avionics subsystems. Senior Level (SL), Department of the Air Force (DAF) (retired).

PRINCIPAL AREAS OF EXPERTISE

Technical Engineering Management

Led the development of technical management methods to improve avionics systems acquisition in the areas of planning, development, verification, and risk management. Led numerous independent review teams (IRTs) that recommended management/technical solutions to correct problems and successfully complete programs. Systems included: B-1, B-2, B-52, F-15, F-16, F-22, F-117, Joint Strike Fighter (JSF), C-5, C-17, and C-130, as well as many weapons and avionics subsystems.

Technical Program Management

Led the development and execution of the USAF's Combat Avionics Initiative. Led the refinement of best value proposal evaluation methodology to capture the long-range impacts of proposed products and processes on life cycle cost. Led the definition of technical processes for quantitatively performing integrated risk assessments. Developed methodology for estimating flight test durations based on test content and processes.

Technical Organizational Development

Led the development of the organic low observables engineering function at Aeronautical Systems Center (ASC). Led the development of organic electronic warfare effectiveness and weapon system survivability analysis capability. Led the definition and acquisition of an electronic technical information system that captures technical and process information at all classification levels. Served as mentor to multiple ASC engineers that now have senior leadership roles in AFLCMC programs.



DAYTON AEROSPACE

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EDUCATION

MS, Electrical Engineering

Air Force Institute of Technology
(AFIT)

BS, Engineering Sciences

United States Air Force Academy
(USAFA)

KEY POSITIONS

Technical Advisor, Avionics Systems Architecture

Aeronautical Systems Center
(ASC)

Chief Avionics Systems Architect

United States Air Force (USAF)

Technical Director, Avionics

ASC Engineering Directorate
(ASC/EN)

Technical Advisor, Defensive Avionics Systems Engineering,

ASC/EN

ORGANIZATIONAL MEMBERSHIPS

Air Force Association (AFA)

National Defense Industrial
Association (NDIA)

Association of Old Crows (AOC)

WORK HISTORY

Senior Associate & Associate | Dayton Aerospace, Inc.

2002-present, Dayton, Ohio

Consultant to the Secretary of Defense (OSD), Air National Guard (ANG), and USAF on avionics acquisition programs such as ALR-69A, B-1, B-2, C-5, C-130, F-15, F-22, and Global Hawk. Also, provide support on various acquisition reform topics including streamlining logistics, systems engineering, and open systems. Frequent consultant to industry and allied countries in areas such as acquisition reform, modular open systems approaches, obsolescence mitigation strategies, technical risk management, radio frequency (RF) threat environment definition and assessment, and system architectures to counter modern threats. In 2012, transitioned from full-time Senior Associate to Associate (subcontractor) status.

Technical Advisor, Systems Architecture | ASC/EN

1996-2001, Wright-Patterson AFB, OH

As chief avionics architect for the USAF, led the development of the Viable Combat Avionics Initiative. Developed and deployed strategy for managing effects of avionics requirements growth, technology obsolescence, and vanishing suppliers over the life of weapon systems. Led the refinement of best value proposal evaluation methodology to capture the long-range impacts of proposed avionics products and processes on life cycle cost. Performed independent study for the Office of the Undersecretary of Defense – Acquisition, Technology and Logistics (OUSD(AT&L)) on potential effects of various F-35 (JSF) avionics acquisition strategies on airborne/space radar industrial base. Study resulted in acceptance of the proposed acquisition strategy. Represented USAF on DOD study of radar industrial base strategies. Supported State Department as the senior technical advisor on a highly sensitive investigation of potential compromise of classified information.

Technical Director, Avionics Engineering | ASC/EN

1992-1996, Wright-Patterson AFB, OH

Led many independent reviews of avionics and air-to-air weapons systems for program offices, program executive officers (PEOs)/designated acquisition commanders (DACs), and higher headquarters. Led tri-service study for OUSD(AT&L) that developed technical rationale that became the basis for the US policy on release of electronic attack systems to foreign countries. Developed methodology for estimating flight test duration based on test content, resource availability, and processes. This methodology was used to refine scope of F-22 proposed test program.

Technical Director, Defensive Avionics Systems Engineering | ASC/EN

1977-1991, Wright-Patterson AFB, OH

Directed multiple independent defensive avionics system reviews for program offices and higher headquarters. Developed strategy and led team that exploited highly classified intelligence information for application to acquisition programs and operational forces use. Led the successful development of organic low observables engineering capability within ASC/EN and the development of organic electronic warfare effectiveness and weapon system survivability analysis capability. Provided technical leadership that resulted in the successful development of highly regarded B-52 electronic warfare systems. Personally, performed cost effectiveness studies of multiple B-52 programs when resources could not support continued development of all programs. Served as technical advisor for coherent angle countermeasure techniques for Have Exit program. Led the development of countermeasure techniques that are effective against even today's modern threats.

Prior to 1977

- Instructor, USAF Electronic Warfare Officer School, *Mather AFB, CA*
- Electronic Warfare Officer, EB-66, *Korat Royal Thai AFB, Thailand*
- Electronic Warfare Officer, B-52, *Mather AFB, CA*

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