



PAUL BEVILAQUA (Virtual Only)

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Biography:

Paul Bevilaqua has spent much of his career developing Vertical Take Off and Landing aircraft. He joined Lockheed Martin as Chief Aeronautical Scientist and became Chief Engineer of the Skunk Works, where he played a leading role in creating the Joint Strike Fighter. He invented the dual cycle propulsion system that made it possible to build a stealthy supersonic VSTOL Strike Fighter, and suggested that conventional and naval variants of this aircraft could be developed to create a common, affordable aircraft for all three services. He subsequently led the engineering team that demonstrated the feasibility of building this aircraft.

Prior to joining Lockheed Martin, Dr. Bevilaqua was Manager of Advanced Programs at Rockwell International's Navy aircraft plant, where he led the design of VSTOL interceptor and transport aircraft. He began his career as an Air Force officer at Wright-Patterson AFB, where he developed a lift system for an Air Force VSTOL Search and Rescue Aircraft. He received degrees in Aeronautical Engineering from the University of Notre Dame and Purdue University.

He is an AIAA Fellow of and a member of the National Academy of Engineering. He is also the recipient of a USAF Scientific Achievement Award, AIAA and SAE Aircraft Design Awards, AIAA and AHS VSTOL Awards, and Lockheed Martin AeroStar and Nova Awards.

Abstract: "Inventing the Joint Strike Fighter"

This presentation will describe the technical and program challenges involved in developing the F-35 Joint Strike Fighter and show how an innovative idea became an international program with engineers from half a dozen countries developing a single replacement aircraft for multiple aircraft types. The F-35 Joint Strike Fighter was developed to meet the multirole fighter requirements of the U.S. Air Force, Navy, Marine Corps, and our allies. The Air Force variant is a supersonic, single engine stealth fighter. The Navy variant has a larger wing and more robust structure in order to operate from aircraft carriers, while the Marine Corps variant incorporates an innovative propulsion system that can be switched from a turbofan cycle to a turbo shaft cycle for vertical takeoff and landing. This propulsion system enabled the X-35 to become the first aircraft in history to fly at supersonic speeds, hover, and land vertically. The development team won the Collier Trophy, which recognizes "the greatest achievement in aeronautics or astronautics in America" each year, for this accomplishment.