

Project Management Office Aviation Systems Realizes Success, Achieves Milestones

COL Anthony W. Potts, LTC Jong H. Lee, and LTC William R. Wygal

The Project Management Office Aviation Systems (PMO AS), in existence since 1999, is charged with the responsibility to manage six product offices and oversee nearly 60 separate and distinct products across all aspects of the acquisition life cycle, from drawing board to retirement. These products are critical to Army aviation to conduct successful peacetime and wartime operations effectively and efficiently throughout the world. PMO AS is responsible for managing these supporting systems and products in an integrated and well-planned manner for the U.S. Army aviation platforms across Program Executive Office Aviation.

Two U.S. Army AH-64D Longbow Apache attack helicopters, assigned to 1st Battalion, 101st Aviation Regiment, return to Forward Operating Base Speicher, Iraq, from a combat mission. (U.S. Air Force photo by TSgt Andy Dunaway.)





The fixed-wing C-12 King Air undergoes contractor maintenance. (Photo courtesy of Product Manager Fixed Wing.)

This article highlights some of the major milestones of three PM AS Product Offices: Joint Cargo Aircraft (JCA), Fixed Wing (FW), and Aviation Ground Support Equipment (AGSE). The next two articles (see Pages 20 and 24) address achievements in the Aviation Mission Equipment and Aviation Networks and Mission Planning offices, and in the Air Traffic Control office.

Joint Cargo Aircraft Transfer

Although we traditionally think of large transport aircraft in connection with the U.S. Air Force (USAF), the Army has a requirement to move Time Sensitive/ Mission Critical (TS/MC) personnel and equipment to points around the globe. The JCA program began in 2004 as the Future Cargo Aircraft (FCA), a project designed to meet the Army's TS/MC mission. In 2005, the Defense Acquisition Executive directed that the separate FCA and the USAF Light Cargo Aircraft programs merge into one JCA program, managed by the Army. The JCA Product Office transitioned known requirements into a contract

requirements package and selected the C-27J Spartan as the platform of choice for the JCA after a detailed source selection process.

In April 2009, Resource Management Decision (RMD) 802 dramatically changed the management of the JCA program by directing the USAF to take over sole management. The Army was directed to transfer both the program and the direct-support airlift mission to the USAF. In addition, RMD 802 also reduced the aircraft procurement quantity from 78 to 38.

The Army maintains the lead and was set to complete the transfer of the program to the USAF by Oct. 1, 2010. In spite of this drastic change in course, the program remains on cost, schedule, and performance.

Fixed-Wing Aircraft Evolution

Although JCA is a fixed-wing aircraft platform, the scope of the program necessitated that it be a stand-alone PM outside the purview of the Army's FW Product Management Office (PMO).

The bulk of the remaining fixed-wing aircraft in the Army's arsenal are centrally managed by the FW PMO. During the 1980s, Congress directed that the centralized management and funding of some of the Army's fixed-wing aircraft be managed under one office. Thus, the Army FW PMO was established in 1983. Although some fixed-wing aircraft still are not managed by the FW PMO, a recent HQDA directive mandated that all Army fixed-wing aircraft be managed at some level by that office.

In January 1957, BG William B. Bunker wrote a paper titled "The Problems of Supply Management in Aircraft Logistics." Assigned to the Transportation Corps, Bunker was responsible for providing logistical support to the Army's dispersed aircraft. Comparing the aircraft and the support and management approaches discussed by Bunker to those of today reveals that, although the major mission sets remain the same (cargo, utility/VIP, and observation), the fleet sustainment and program management have morphed to best meet the needs of the warfighter.

Bunker's 1957 article explained that Army aircraft are of a "standard commercial design which, with or without modification, are usually procured from the normal manufacturers of similar civil items. ... While we usually supply a statement of our requirements and ... spend many hours in a meticulous review of details of design on the part of the manufacturer, it is highly debatable ... that we ... add anything to the technical assemblage that goes to make a complete aircraft. As a consequence ... it is in the final analysis, ... [the manufacturer's] airplane and we have merely decided that the assemblage which they have designed is as near satisfactory for our purpose as we can expect to get."

The Army continues to purchase commercial aircraft in accordance with the concept explained in Bunker's article, and the fixed-wing aircraft fleet of today is composed exclusively of commercial and commercial derivative aircraft. When selected, the Future Utility Aircraft is also expected to be a commercial or commercial derivative aircraft.

Although more than 50 years have passed since Bunker's paper was first published, fundamental logistics principles and goals remain the same. Army

fixed-wing aircraft were supported initially by a military maintenance structure, but in the late 1970s, the Army began a transition from organic maintenance support to contractor logistic support when it stopped training fixed-wing fleet maintainers because the fleet size was too small to provide a hierarchy for advancement. This change continued through the 1980s, when all the Army's military occupational specialties for fixed-wing mechanics were eliminated. Since that time, all Army fixed-wing maintenance has been performed exclusively by commercial sources. What has not changed over the years, however, is the logisticians' ability to recognize the importance and benefits of basic logistics concepts such as standardization and maintainability. Although we remain limited in our ability to influence the design of commercial aircraft, the Army benefits tremendously from standardization with larger commercial markets.

The operational and tactical management of Army fixed-wing aircraft has also changed over the past 50 years. When Bunker's article was published, cargo aircraft belonged to Aviation Classification Repair Activity Depots, observation aircraft belonged to maneuver units, and utility aircraft belonged

to major commands. Referring to the Army Fixed Wing Force in 1957, Bunker indicated that the "high command has repeatedly emphasized that we have no desire nor necessity to reestablish a separate Army Air Corps to handle our ... aviation program but can fit it into our existing structures." That viewpoint was completely reversed on April 12, 1983, when Army aviation was consolidated and became a separate branch of the Army, in recognition of the demonstrated and ever-increasing importance of aviation in Army doctrine and operations.

Aviation Ground Support Equipment Portfolio

Ground support of all Army aircraft, whether it is fixed-wing or rotary-wing, is accomplished by the AGSE PMO. Before it was established, AGSE was a weapon system management directorate tasked with a sustainment mission. In December 2003, the Army formally recognized the need for total life-cycle management of the ground support equipment that was used for aviation platforms fleetwide, and the AGSE PMO was chartered. The PMO's maintenance mission continues to mature as the aircraft it supports are modernized.

The Aviation Ground Power Unit (AGPU) is an example of the maturing technology in use today. This gas-turbine, engine-powered, enclosed auxiliary unit is wheel-mounted and self-propelled. It provides AC/DC electrical, hydraulic, and pneumatic service for all Army rotary-wing aircraft. The current AGPU includes enhanced electrical service for the AH-64D Apache Longbow helicopter and has a zero-time overhauled gas-turbine engine and hydraulic module, larger fork wells to allow for handling by rough terrain forklifts, and new hydraulic hoses.

The Aviation Intermediate Maintenance (AVIM) Shop Set (SS) Plus program provides an easily transportable and modular maintenance capability



The Aviation Ground Power Unit provides AC/DC electrical, hydraulic, and pneumatic service for all Army rotary-wing aircraft. (Photo courtesy of PM AGSE.)

that allows units to provide logistic and maintenance support across the spectrum of military operations and platforms. The AVIM SS Plus complex includes nine 20-foot shelters providing specialized maintenance areas for Soldiers. A tenth SS will soon be added, providing a specific area for armament and electrical (A&E) work. This A&E SS will replace three existing shop sets.

The latest addition to the AGSE portfolio is the Standard Aircraft Towing System (SATS). The SATS will provide units with a standardized towing system to reposition both fixed- and rotary-wing Army aircraft and their AGSE in aircraft hangars and maintenance areas. Capable of navigating on both improved and unimproved surfaces, the SATS is highly anticipated in the U.S. Central Command area of operation. The program received approval to enter into full-rate production in June 2010, with the first unit slated to receive its systems in September 2010.

The future of AGSE includes programs such as the Aviation Sets, Kits, Outfits, and Tools (A-SKOT), which will modernize seven separate tool kits for aviation maintenance company and aviation support company mechanics. A-SKOT provides warranted, aerospace standard tools and an instant tool inventory capability. It will also provide an enhanced Aviation Foot Locker to support preventive maintenance and



The UC-35 is an example of an Army-managed commercial design. (Photo courtesy of Product Manager Fixed Wing.)

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servicing of aircraft at the Aviation Unit Maintenance (AVUM) level. Further down the line, it is anticipated that the AVUM Alpha 92 will be modernized with an electrically powered, air-transportable shelter set mounted on a 5-ton truck and a trailer-mounted 20-foot International Organization for Standardization shelter. Additional modernization of the AVIM SS is also anticipated to provide commanders with the maintenance capability to operate in nonlinear, split-based operations.

Connecting Past and Present

Looking back at the Army of Bunker's era, we can clearly see that the old adage is true: The more things change, the more they stay the same. Army aviation of today is a dynamic community on the cutting edge of technology development and maintenance operations and concepts. The U.S. Army fleet is the most modern in the world, using technology that was, at best, only discussed in science fiction books of Bunker's era. That technology is used to integrate ground and air forces with other services and with civil and international forces. But in spite of our state-of-the-art ways, today's aviation is easily recognizable to the aviators of yesterday. The fixed-wing fleet remains a collaboration with our industry partners; we still rely heavily on fixed- and rotary-wing aircraft and the aviation support systems that enable them to conduct successful military missions; and we have continual logistics

challenges to solve as our personnel and fleet are spread across the globe. We in PM AS continue to take advantage of maturing technologies to provide world-class aviation aircraft and flight support products for today's warfighters in the field.

COL ANTHONY W. POTTS is the Project Manager for AS. He holds a B.S. in management information systems from Murray State University, an M.B.A. from the University of Kentucky, and a Master of Strategic Studies from the U.S. Army War College. Potts is Level III certified in program management and is a U.S. Army Acquisition Corps (AAC) member.

LTC JONG H. LEE is the Product Manager for FW Aircraft. He holds a B.S. in aerospace engineering from the University of Colorado at Boulder and an M.S. in aerospace engineering from the Georgia Institute of Technology. Lee is certified Level III in program management and systems planning, research, development, and engineering-science and technology manager, and Level II in test and evaluation. He is an AAC member.

LTC WILLIAM R. WYGAL is the Product Manager for AGSE. He holds a B.B.A. from National University and an M.A. in procurement and acquisition management from Webster University. Wygal is certified Level III in program management, Level II in information technology, and Level I in life-cycle logistics and production, quality, and manufacturing. He is an AAC member.