

Unmanned Aircraft Systems: The Intersection of the Army

by Tim Owings, deputy project manager, Army Unmanned Aircraft Systems

As Unmanned Aircraft Systems have become increasingly integral to modern warfare, they have in many ways become the intersection of the ground component fight. It is at this intersection that the unmanned and manned aviation assets merge with the intelligence, fires, communications and maneuver elements of the Army and Marine Corps.

We have continued to see explosive growth across all echelons of our systems as they have become the critical link that ties the Army's integration efforts together. The best part is we are just getting started with no shortage of new ideas or possibilities on the horizon. The Army's fleet of unmanned aircraft continues to prove its worth in combat with nearly 1.2 million combat flight hours. As Unmanned Aircraft Systems shoulder more of the load, those numbers will continue to rise dramatically.

The Army model is to provide the most automated, capable and safe systems in the hands of our soldiers and Marines. The term "unmanned aircraft system" is actually a misnomer and does not give credit to the amazing Americans that keep the UAS fleet flying around the clock. UAS operators, some as young as 19 years old, are assigned the great responsibility of flying and maintaining one of the most advanced technologies on the battlefield. Their mission is as important as any in today's or tomorrow's wars. These kids live, eat, play and endure the same hardships as the warfighters they support, because they are directly assigned to forward deployed maneuver and combat units. The bond created between UAS operators and the combatant soldier ensures complete trust, working knowledge and camaraderie amongst all members within the combatant commanders area of influence. I am continually amazed at the quality of our enlisted soldiers and their ability to adapt to ever-changing missions.

The Army's manned-aviation community has grown to rely on unmanned aircraft providing "eyes beyond the horizon" and affording the manned aviator a less hazardous work environment. The introduction of on-demand video streaming into the cockpit of an Army Apache or Kiowa from an unmanned aircraft some 10 to 20 km away has revolutionized the tactics and procedures of the aviator. My office works to ensure that we provide capabilities that not only work well by themselves but work even better together. We are focused on fielding interoperable systems that allow new capabilities to be "cookie-cut" into the combined system of interoperable manned and unmanned assets. Our goal is to change the combat commander's risk calculus and to give him options that offer little to no risk of loss of life for soldiers and marines.

First-generation unmanned aircraft were deployed with the mission of intelligence, surveillance and reconnaissance. Our nation is in its ninth year of war, in which the Army is fully engaged. Throughout the nine years of persistent conflict, the mission of the unmanned aircraft has evolved beyond intelligence collection. With that said, the Department of Defense's intelligence community still relies heavily on the video streaming from the wide array of unmanned aircraft payloads maintaining a constant vigil above the theaters of Operation New Dawn and Operation Enduring Freedom. Today, UAS platforms carry out a wide variety of intelligence-gathering missions in support of both strategic and tactical initiatives. Signals intelligence gathering and electronic warfare are major technology thrusts in today's combat. We have seen broader acceptance of synthetic aperture radar applications and a push for more lethal systems as well. Finally, I expect Wide Area Aerial Surveillance to be the next game-changing technology to be flown off UAS.

Terrain features and geographical landmarks in Afghanistan have severely handicapped our ability to communicate across echelons and short expanses of area. American forces, forward deployed to Operation Enduring Freedom, have been introduced to the aerial communications relay capabilities of the Shadow, Hunter and Gray Eagle aircraft. Maneuver units have grown to rely on the watchful "eye in the sky" unmanned aircraft to alert them to possible improvised explosive device emplacements and the massing of enemy forces and to provide battle damage assessment to ensure the success of recent missions.

Unmanned aircraft deployment has come a long way from the initial airframes and missions. The Army's UAS Project Office, and its partners within the U.S. Marine Corps, Army Training and Doctrine Command Capabilities Manager, and the Army G3/G2 offices, is poised to continue our central role of providing the most capable, automated, lethal and interoperable systems available to our warfighters. I believe Unmanned Aircraft Systems are the most dynamic and rapidly changing technology on the battlefield today. The best part is we are just getting started.