On the battlefield of the future, the RAH-66 Comanche helicopter and Unmanned Aerial Vehicles (UAVs) together will provide a quantum leap forward in reconnaissance and combat capabilities.

Manned aviation provides the critical decisionmaking component for battlefield dominance. The crew will maintain the digital information connection between the Comanche reconnaissance platform and the UAV’s long-dwell, real-time tactical surveillance sensors.

The UAV Contribution

UAVs serve as the forward-looking eyes of the force, linking pilots, ground troops and commanders with a common battlefield picture. They loiter over enemy areas at extended ranges, relieving pilots of protracted missions over unfriendly territory.

While current UAV technology faces limits in recognizing and identifying a target’s details or battlefield context, future developments promise greater capabilities and increased deployments. When Comanche is added to the equation, combat resources are significantly improved for commanders, troops on the ground and aviation forces.

As we look [at the reconnaissance mission] in the next 10 to 12 years . . . we don’t see a technological solution replacing a manned platform to perform aerial reconnaissance.

MG John M. Curran, Commanding General, U.S. Army Aviation Center and Fort Rucker

Comanche’s Contribution

The RAH-66 has a low-observable design to reduce infrared, acoustic, radar and visual signatures. The variable-load armament arrangements include missiles, 2.75 inch rockets and a Vulcan II 20mm Gatling gun. These assets, combined with Comanche’s array of electronic intelligence, surveillance and reconnaissance (ISR) equipment, foster its role as a valuable source of real-time combat information and as a lethal fist delivering decisive results in future operations. This dual capability allows commanders and ground forces to rely on Comanche for eyes-on-the-target collaboration to provide a strategic battlefield view or a tactical, infantry squad overwatch and close-combat function. Comanche adds a new dimension to battlefield management.

Integrating forward sensors and precision munitions on a versatile, manned aircraft reduces the decision time between threat identification and reaction. With swift judgment and flexible response options, pilots choose whether or not to engage an enemy decisively with joint offboard or onboard precision fires. The range of solutions prevents the adversary from taking the initiative or exploiting a surprise advantage in combat.
Teaming on the Battlefield

The Comanche allows the crew to direct and manage the UAV from the cockpit while in flight. The result is that pilots can proceed into the battlefield with a timely and accurate understanding of what awaits them beyond their lines of sight. Comanche crews also have the capability to further investigate potential high-priority targets and clarify points of interest that UAVs may overlook. Without the "man in the loop" on location, controlling the direction and pace of a combat operation as it unfolds, the Comanche/UAV team loses its punch.

The Human Factor

Whether by command direction or pilot determination, redirecting Comanche becomes more efficient because of integrated communications and sensors, formidable electronic and armament capabilities and a human at the controls, evaluating and adapting to battlefield demands. Comanche's tactical and technological leaps hinge on the awareness, perspective and discriminating lethality only a man in the loop can provide.

Technology will undoubtedly reduce our combat workload, enhance our ability to see over the horizon and reduce the threat of casualties to our aircrews. Yet the ability of the human eye to see and brain to detect and discriminate [remains] better than any sensor.

BG Michael A. Vane,
Deputy Chief of Staff for Doctrine,
U.S. Army Training and Doctrine Command

The Comanche/UAV Team—A Quantum Leap Forward in Reconnaissance and Combat Capabilities