Boeing Develops Unique Software to Test, Demonstrate Apache and Comanche Battlefield Capabilities

Unique software created by engineers at The Boeing Company is giving designers of the world's most advanced combat helicopters a close up look at their aircraft in battle without leaving the laboratory.

The Advanced Tactical Combat Model (ATCOM) software can measure the effectiveness of the AH-64D Apache Longbow in battlefield scenarios, evaluate potential new systems on the aircraft and assess how it will work in the battlefield of the future with its companion ship the RAH-66.

The Boeing Company here recently began using ATCOM, developed at the Boeing Rotorcraft Program Management Center in Philadelphia, Pa., to demonstrate the mission effectiveness of the Apache and the Comanche as a team.

"The software is a great analysis tool to show off the unique capabilities of the Apache and the Comanche as a team and how much better they function than other helicopters," said Scott Swinsick, senior operations research analyst at The Boeing Company in Mesa.

The AH-64D Apache Longbow is the U.S Army's next generation version of the combat-proven AH-64A, built by The Boeing Company in Mesa. The AH-64A and the AH-64D are in service with defense forces around the world.

The advanced, multi-mission Apache Longbow features fully integrated avionics and weapons plus a state-of-the-art modem that transmits real time, secure, digitized battlefield information to a wide range of air and ground forces.

The RAH-66 Comanche helicopter, in development by The Boeing Company in Philadelphia, will team with the Apache Longbow on the digital battlefield of the 21st century.

The software allows a simulated view from the cockpit of an Apache or Comanche. Digital terrain data from around the world can be loaded to test the aircraft's capabilities in battlefields in any part of the globe.

ATCOM includes a flight stick with controls for firing weapons and controlling sensors. The system can "fly" the aircraft through an area, hover, scan with fire control radar and "launch" RF Hellfire missiles.

Engineers can also replace and change systems and avionics and test the survivability of the aircraft with the simulated new systems installed.

Boeing Philadelphia developed the software originally to test the Comanche's detectability, said Rupert Seals, senior technical specialist in Military Technology there.

"We want to be able to simulate the advanced capabilities and low-observable qualities of the Comanche," he said. "It was a logical extension to adapt this technology for the Apache Longbow."

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