Boeing, Lockheed Martin to Enhance New-Generation Targeting/Night-Vision Suite for Apache Longbow

The Boeing Company and Lockheed Martin have agreed to initiate the incorporation of new technology into the new-generation Arrowhead sensor system that will give the AH-64D Apache Longbow the world's most versatile and capable targeting and night-vision system suite by 2005.

Boeing in Mesa, Ariz., and Lockheed Martin Missiles and Fire Control in Orlando, Fla., will work together to incorporate a large-format staring mid-wave (MW) forward-looking infrared (FLIR) sensor in the Arrowhead system for the Apache Longbow.

Boeing is the prime contractor on the multi-role combat helicopter, while Lockheed Martin is developing Arrowhead for the Apache Longbow.

The agreement comes at the end of studies conducted by both companies; these studies looked at the validity of the technical approach and verified the cost-versus-benefit to the customer base. This upgrade leverages new technologies already in development for Lockheed Martin's Arrowhead sensor suite for the U.S. Army. Lockheed Martin developed the advanced-generation Arrowhead sensor suite as a follow-on replacement for the Target Acquisition Designation Sight/ Pilot Night Vision Sensor (TADS/PNVS) system it produced for all Apaches built to date by Boeing.

The core of the new upgrade for Arrowhead is the staring mid-wave integrated detector/cooler assembly (IDCA) that is identical to the IDCA used in Lockheed Martin's Sniper pod.

This new upgrade will complement the excellent obscurant penetration of the existing long-wave sensor with a longer-range, smaller-field-of-view MW sensor. The combination will provide the Apache aircrew with unmatched electro-optical targeting performance in all conditions. The new MW electro-optical system can identify targets at greater ranges than the long-wave system.

Proposed integration of this additional capability will follow the current AH-64D philosophy that enables autonomous, cooperative, and multiple sensor selection and display.

"The MW enhancements will improve the Arrowhead sensor suite without giving up any of its new-generation capabilities," said Al Winn, vice president of Apache Programs for Boeing. "Lockheed Martin's new sensor suite already brings outstanding capabilities to the Apache Longbow. This addition will give Apache the best combined sensor package installed in any aircraft -- rotary or fixed-wing."

Dave Shrum, program director of the Arrowhead project at Lockheed Martin, said, "The U.S. Army has future interest in further upgrading the Apache targeting system with this capability, and it has introduced this additional feature in its modernization planning.

"We have agreed to work with Boeing in advance of an Army contract to implement this capability in the targeting sensor while maintaining all existing Arrowhead capabilities."

The MW FLIR was proposed to the U.S. Army as an option in the TADS/PNVS modernization competition conducted last year, but the option was not exercised at contract award due to funding constraints. Arrowhead is scheduled to be installed on Apache Longbow aircraft beginning in 2004. The proposed enhancements would be installed a short time thereafter.

Tom Mirek, technical director for Arrowhead at Lockheed Martin, added, "We designed Arrowhead from the start to accept additional upgrades such as this without the need for any redesign beyond the Direct View Optical Sensor. The end result will be an affordable enhancement at low risk for our customers."

The Apache Longbow is in production for the U.S. Army and a growing number of defense forces worldwide. Nearly 1,200 AH-64A and AH-64D Apaches have been delivered.

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