# Team Apache Systems to Modernize Apache Sensors With "Arrowhead"

The U.S. Army has selected a new sensor system - to be known as Arrowhead - that will give the AH-64D Apache Longbow multi-role combat helicopter significantly greater night vision and targeting capabilities.

The U.S. Army awarded the $78.5 million development contract last week to Team Apache Systems (TAS), a limited liability company composed of The Boeing Company and Lockheed Martin, for the Arrowhead advanced targeting and navigation system.

The team will proceed with an engineering and manufacturing development program during which TAS will develop, test and qualify the sensor suite to replace the current AH-64 infrared targeting sensor and add an image intensification capability to the pilotage sensor.

The next-generation Forward Looking Infrared (FLIR) and Image Intensification Television (I2TV) sensor suite will be adaptable for both the AH-64A Apache and the AH-64D Apache Longbow, manufactured by Boeing in Mesa, Ariz.

The sensor suite is a modernization of the Apache's Target Acquisition Designation Sight and Pilot's Night Vision Sensor (PNVS), providing improved performance, more effective integration and maximum use of the Apache weapon system. The system will improve performance by nearly 100 percent while improving reliability more than 130 percent over the current high-performance system.

These new sights and sensors increase the lethality and survivability of the Apache with enhanced capabilities to detect, identify and engage targets at greater ranges. The new sensor suite also provides for improved image quality and increased effectiveness and safety in day/night and adverse weather operations.

"This system will give the Apache a quantum leap forward in sensor system performance," said Larry Plaster, manager of the Boeing Apache Modernization Program. "In addition to significantly improving the Apache's combat effectiveness, these new sensors will substantially reduce the cost of ownership with improvements in both reliability and maintainability."

The improvements in reliability and the improved built-in test of the Arrowhead system will save the U.S. Army more than 50 percent in operating and support costs, Plaster added.

The modernized PNVS will give Apache pilots the option of a selectable FLIR or I2TV image for better situational awareness.

Provisions for image fusion and wide field-of-viewhelmet-mounted displays can be added to the system in future improvements. Arrowhead's digital video enhances recording capability and facilitates still-frame video imagery transmission to the ground commander or to other aircraft during normal operations. Arrowhead is designed for "plug-and-play" component replacement that can be accomplished within minutes at the flightline.

The Arrowhead team includes subcontractors DRS Technologies, Inc. of Torrance, Calif.; Ball Aerospace of Westminster, Colo.; Sarnoff Corporation of Princeton, N.J.; and AIM AEG Infrarot Module of Heilbronn, Germany.

The Arrowhead system engineering, manufacturing and development phase begins immediately with the contract announcement, and production is planned for late 2003. Fielding is expected as early as 2004.

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