Boeing Synthetic Vision System Improves Visibility for Rescue Mission Pilots

Boeing [NYSE: BA] today announced the successful field testing of its new Enhanced/Synthetic Vision System (E/SVS) designed to increase situational awareness for rescue mission pilots during approach and landing in various environmental and ambient lighting conditions.

Developed by Boeing Advanced Systems and Boeing Phantom Works, the E/SVS will be integrated into the HH-47 aircraft proposed for the U.S. Air Force Combat Search and Rescue (CSAR) program. The E/SVS will provide pilots real-time images and passive/active detection of hazards present in landing areas.

"This system is an added measure of protection and safety for rescue pilots and crews," said Van Horn, Capture Team lead on Boeing's CSAR proposal. "The E/SVS will be a substantial enhancement for our aircraft and will significantly improve mission performance during search and rescue operations."

The E/SVS demonstration field test validated the integration of multiple sensors, including infrared low-light level video cameras and laser radars that provided real-time, 185 degree panoramic viewing for pilots and crew via sensor and synthetic data fusion. The demonstration also evaluated millimeter wave radar and hyperspectral sensors.

The system will detect obstructions such as wires, vehicles or personnel present in landing areas, but hidden in brownout, whiteout or other zero-visibility conditions. The operational E/SVS system will provide 360 degree coverage with video data available to the flight crew through five Head Mounted Displays and one spare cabin video system.

The E/SVS is supplemented with terrain references from Digital Terrain Elevation Data, charts or satellite imagery and will provide imaging in a variety of conditions where pilots and crew would normally operate on instruments.

The system can be utilized on standard CH-47 Chinook and AH-64 Apache helicopters as well as the V-22 Osprey tiltrotor in future applications.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses. Headquartered in St. Louis, Boeing Integrated Defense Systems is a $30.8 billion business. It provides network-centric system solutions to its global military, government and commercial customers. It is a leading provider of intelligence, surveillance and reconnaissance systems; the world's largest military aircraft manufacturer; the world's largest satellite manufacturer; a foremost developer of advanced concepts and technologies; a leading provider of space-based communications; the primary systems integrator for U.S. missile defense; NASA's largest contractor; and a global leader in sustainment solutions and launch services.
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