

## **Boeing Begins Testing New Software Block with X-45A Flights**

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The Boeing [NYSE: BA] Company began testing its third block of software for the X-45A unmanned aircraft during flights on Oct. 21 and 28th at NASA's Dryden Flight Research Center, Edwards Air Force Base, Calif.

Following a series of successful ground and taxi tests in August and September, the aircraft's Oct. 21 mission ensured the single-ship capabilities demonstrated in the previous software block functioned properly with the new software.

The Oct. 28 flight was the first test of the unmanned system's capability to rapidly respond to a changing environment. The "Automated Dynamic Mission Replanning" function responded to a simulated "pop-up" ground threat during the flight by defining a revised route to avoid the threat, communicating it back to the pilot-operator, and following it after the pilot-operator concurred. After avoiding the pop-up threat, the X-45A resumed its primary route and continued on its direct attack mission.

"Our team has done an incredible job moving forward into the third block of software with the 36th and 37th X-45A flights," said Darryl Davis, Boeing Joint Unmanned Combat Air Systems (J-UCAS) X-45 vice president and program manager. "During Block 3, we'll give the U.S. Air Force and Navy their first glimpse of how effective two unmanned combat aircraft can be when operating in a dynamic tactical environment."

Boeing was recently awarded \$767 million in funding from the Defense Advanced Research Projects Agency (DARPA) to build and demonstrate three X-45C aircraft, two mission control elements, and to integrate a common operating system technology for the J-UCAS program. The first X-45C flight is scheduled to take place in early 2007.

The J-UCAS X-45 program is a DARPA/U.S. Air Force/U.S. Navy/Boeing effort to demonstrate the technical feasibility, military utility and operational value of an unmanned air combat system for the Air Force and the Navy. Operational missions for the services may include suppression of enemy air defenses; strike; electronic attack; intelligence, surveillance and reconnaissance; and persistent global attack. The two X-45A technology demonstrators are currently verifying the core functionality of the software necessary for these and related missions. Boeing's software tested on the X-45As may be offered as a candidate for functionality in J-UCAS' Common Operating System.

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