Boeing Advances Live, Virtual and Constructive Training Capability

ST. LOUIS, Nov. 25, 2008 -- Boeing [NYSE: BA] has built on the success of Project Alpine, last year's Integrated-Live, Virtual and Constructive (I-LVC) training proof-of-concept demonstration, with a second demonstration conducted last week in St. Louis. Boeing used existing technologies to network an F-15E aircraft (live) with an F-15E simulator (virtual), while integrating computer-generated threats (constructive) into both environments.

"Spiral Two of Project Alpine builds on last year's successful air-to-air training, bringing in a new, sophisticated, air-to-ground capability," said Mark McGraw, vice president for Boeing Training Systems and Services. "Through the use of I-LVC technology, we can improve the effectiveness of any training mission by increasing the intensity and responsiveness of threats that warfighters face during their exercises. This will help prepare them for the realities of a live-combat situation."

"The Alpine Team demonstrated some tremendous capabilities for the warfighter. The ability of an aircrew to perceive synthetic and virtual systems in the same manner as they perceive live systems is vital for effective training," said U.S. Air Force Col. Daniel R. Walker, commander, Mesa Research Site, and chief, Warfighter Readiness Research Division. "Twenty-first century warfare demands we find cost-effective ways to improve the realism of our training. Capabilities like those demonstrated by the Project Alpine team represent a major step forward in that endeavor."

During the demonstration, Boeing F-15E pilots completed a three-sortie, progressive mission designed to demonstrate several new training capabilities. In the first sortie, one live and one virtual F-15E aircraft targeted and destroyed computer-generated ground targets using simulated ordnance. In the second sortie, the pilots had to defeat computer-generated pop-up air and ground threats before completing the original mission. The last sortie featured virtual command-and-control resources using the live Link-16 datalink to assign the live and virtual F-15E pilots to time-sensitive targets, simulating real-world communications.

"I-LVC eliminates the geographical constraints of having to train over existing ranges, allowing pilots to train virtually in almost any operating area," said McGraw. "By removing these constraints, pilots can be exposed to more scenarios in a shorter period of time, at an affordable cost."

The technology behind the I-LVC demonstration significantly decreases the number of live assets needed to run a multiship training operation. With this capability, a training exercise that would have required six operational, crewed aircraft now requires only one, resulting in cost savings and environmental benefits.

"Boeing is continuing to follow its research plan and will conduct its third spiral of the proof-of-concept demonstration next year," said McGraw. "The focus of Spiral Three will be the integration of a live platform into a Distributed Mission Operations virtual and constructive multisite mission."

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