Boeing Supports JSTARS/Predator UAV Battlespace Imaging Demonstration

An airborne information-communications system developed by Boeing has helped demonstrate enhanced battlespace imaging through the eyes of a Predator unmanned aerial vehicle.

The Boeing Aviation Information Services (AIS) antenna system was installed on a Joint Surveillance Target Attack Radar System (Joint STARS) aircraft for a recent demonstration over Nellis Air Force Base, Nev. Receiving a real-time satellite video feed from a Predator Unmanned Aerial Vehicle (UAV), the Boeing AIS system markedly enhanced the Joint STARS aircraft's ability to precisely identify, track, and target specific ground objects.

"The demonstration went off without a hitch and opens the door for taking greater advantage of commercial dual use technology," said Major Scott Wilcoxen, project manager with the UAV Battlelab. "Feeding live imagery to command and control platforms like Joint STARS while en route and on orbit significantly improves the ability of commanders to make critical decisions real time and permits the warfighters to execute their mission more effectively."

The Boeing AIS antenna system originally was installed aboard a Joint STARS aircraft last spring for its part in the Air Force Expeditionary Forces Experiment EFX '98. The system received imagery via a commercial SATCOM link Boeing established on behalf of system integrator Northrop Grumman.

The AIS system is based on phased-array antenna technology developed by Boeing. The 1,500-element antenna is novel in design and approach: it is only 1.2-inches thick, 2 feet by 3 feet in size and is electronically steered to allow instantaneous connections between satellites and mobile platforms.

"I am extremely pleased with our system's performance," said Livingston L. Holder, Jr., AIS program manager. "I think it shows how commercial technology could prove to be a very effective way to leverage taxpayers' dollars while improving our national defense systems. A cooperative spirit between industry and the government is beneficial to all of us."

The demonstration was sponsored by the U.S. Air Force Unmanned Aerial Vehicle Battlelab, Eglin Air Force Base, Fla.

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