

3 of a kind

Launch of third Boeing WGS satellite provides U.S. forces global wideband coverage **by Dave Garlick**

With the December 2009 launch of a third Boeing Wideband Global SATCOM satellite, U.S. warfighters will have access to broadband communications almost anywhere on the planet after the satellite goes into operation in the second quarter of 2010.

Operating over the Pacific, Atlantic and Indian oceans, the trio of satellites will give the U.S. Defense Department more than eight times the bandwidth provided by the constellation of previous-generation military satellites and provide commanders with essential communication capability.

"Now more than ever, our nation depends on our ability to successfully deliver space-based capabilities with 100 percent mission success," Col. Gary Henry, WGS-3 mission director, Military Satellite Communications Wing, Los Angeles Air Force Base, said at a recent WGS press conference.

Building such a high degree of capability and reliability into the system was not without challenges. Rick Lyell, a Boeing mechanical systems engineer who is responsible for the spacecraft's structure and deployment systems, said the biggest challenge for him and his teammates was the two antenna pallet structures on WGS-3. "It took many months of intensive work to make sure the arms holding the 10 antenna dishes that focus the satellite's spot beams folded out correctly to their exact positions in space," Lyell said.

Watching the launch of a satellite they've worked on for a long time also can be an emotional experience for Boeing employees. "You see it move through the factory. You work on it, touch it, and then one day it's gone," said Son Nguyen, a WGS system engineer. "Just like raising kids, eventually you have to let go—we have to put the satellite in space where it can do what it's designed to do."

The next three Boeing WGS satellites will feature additional support for Airborne Intelligence, Surveillance and Reconnaissance missions. WGS-4 is slated for launch in 2011; all six WGS satellites are scheduled to be in orbit by 2013. ■

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PHOTO: The third Boeing Wideband Global SATCOM satellite is positioned in its two-piece launch vehicle fairing at Cape Canaveral, Fla., in preparation for launch on a United Launch Alliance Delta IV rocket in December 2009. UNITED LAUNCH ALLIANCE

