1st Boeing 702MP Satellite on Track for 2012 Launch Following Key Test

Intelsat IS-22 completes UHF hosted payload test in 1 day

EL SEGUNDO, Calif., Aug. 9, 2011 -- Boeing [NYSE: BA] today announced that its Space & Intelligence Systems division has completed a key compatibility test of its UHF hosted payload with the company's newest satellite. The 702MP model satellite IS-22 is being built for Intelsat.

The Passive Intermodulation (PIM) test -- which was completed in less than one day in June -- usually takes a week or longer, according to Boeing engineers. They credit the success to an innovative design approach and proactive risk-reduction plan.

"The successful PIM test indicates that Intelsat IS-22 will have superior on-orbit performance," said Craig Cooning, Space & Intelligence Systems vice president and general manager. "Completing the test in such a short time, with no issues, demonstrates the viability of hosted payloads and of commercial deployment of a government-required system. It also means that our development program continues to meet or beat our schedule, something that's a noteworthy achievement with a new satellite design."

PIMs are interfering signals that can be generated when a satellite's own high-power radio frequencies interact with its structure. The test is designed to assure this potential interference is negligible.

"Having a negligible PIM level is like yelling across a canyon but keeping your echo from interfering with the whisper from the other end," said Steve Dunton, Boeing lead for UHF Hosted Payloads. "UHF payloads are especially susceptible to PIM. Past programs have either designed custom satellites for UHF or limited their UHF capability to avoid this issue. This test demonstrated our ability to combine a full-capacity, 42-channel UHF payload with a standard commercial satellite."

The Boeing team accomplished the one-day test by starting with analytical computer models and quickly progressing to one-fifth scale models. Tests of low-fidelity, full-scale models were followed by tests of a high-fidelity, full-scale model of key elements. Finally, the entire UHF antenna system's PIM capability was verified over a wide temperature range.

"In the past, we were much more dependent on 'whole satellite' level tests," said Bob Reynolds, a Boeing Technical Fellow and PIM expert. "With our proactive risk reduction plan, we didn't have to wait to test the entire satellite. We developed new test equipment to simulate all the transmitters and signals, so we could resolve issues before the actual satellite test."

A unit of The Boeing Company, Boeing Defense, Space & Security is one of the world's largest defense, space and security businesses specializing in innovative and capabilities-driven customer solutions, and the world's largest and most versatile manufacturer of military aircraft. Headquartered in St. Louis, Boeing Defense, Space & Security is a $32 billion business with 64,000 employees worldwide. Follow us on Twitter: @BoeingDefense.

# # #

Contact:

Kathleen M. Cook
Space & Intelligence Systems
Office: 314-233-6818
Mobile: 314-705-2239
kathleen.m.cook@boeing.com

Diana Ball
Space & Intelligence Systems
Office: 562-797-4303
Mobile: 714-319-1014
diana.ball@boeing.com

Additional assets available online: Photos (1)