Boeing Demonstrates 'One-Button' Start-Up of Satellite Ground Station

The Boeing Company [NYSE: BA] and its TEAM TSAT partners have successfully demonstrated the "one-button" start-up feature of its U.S. ground station, an essential element of the companies' Transformational Satellite Communications System (TSAT) offering.

The feature allows a ground station technician or a remote command center operator to use one button on a control panel to go from a full "off" condition to full communications operation within minutes, even under adverse operating conditions. The hardware also supports a U.S. Air Force requirement that TSAT spacecraft operate without constant monitoring and adjustment.

"As we move toward the TSAT Space Segment award date, it's clear the Boeing design performs beyond specification with fewer components that are more commercially available," said Howard Chambers, vice president and general manager of Boeing Space and Intelligence Systems. "TEAM TSAT's solution significantly reduces cost and risk, and provides a robust ability to continue operating under conditions that would sideline all other competing designs."

The high-bandwidth Continental United States (CONUS) Ground Gateway Element (CGGE) connects the U.S. terrestrial communication network and TSAT satellites, providing instant Internet-like connectivity between in-theater assets and command authority throughout the world.

Boeing's CGGE integrated product team built the hardware using independent development funds from Boeing and teammate SAIC.

The demonstration marked the program's most recent milestone in a series of first achievements. Earlier this year, TEAM TSAT demonstrated the full operational performance of the CGGE Data Processing Center (DPC), which compares two identical high-speed communication streams from different sources in real time and forwards the best-quality data to the terrestrial information network. Boeing teammate Harris Corp., developed the hardware using independent development funds.

Additionally, the CGGE team in April met performance requirements for the operational TSAT system during the Space Segment Design Review. The team demonstrated end-to-end communication performance from user terminals (for both communication-on-the-move and intelligence, surveillance and reconnaissance) to the TSAT satellite Next-Generation Processor Router, through the satellite communications payload transmitter to the brassboard ground station receiver and on through the DPC.

In 2006, the team also was first to achieve full-speed communications in laboratory and field tests, demonstrating specified communication quality and performance under worse-than-specified conditions. In the same year, the team was the first to achieve extended-duration operations without any human monitoring or adjustment.

Boeing's TEAM TSAT consists of Cisco Systems, Hughes, IBM, Harris Corp., Ball Aerospace & Technologies Corp., LGS Innovations, Raytheon, General Dynamics C4S, L-3 Communications, BBN Technologies, EMS Technologies, SAIC and Innovative Communications Engineering (ICE). The Boeing team submitted its proposal to the Air Force on July 30. The Air Force is expected to announce the winner of the multi-billion-dollar TSAT space segment contract in January 2008.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses specializing in innovative and capabilities-driven customer solutions. Headquartered in St. Louis, Boeing Integrated Defense Systems is a $32.4 billion business with 72,000 employees worldwide.
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