



Northrop Grumman Enables Assured Warfighter Communications by Demonstrating Affordable PTW Space Processor

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REDONDO BEACH, Calif., April 15, 2015 /PRNewswire/ -- Northrop Grumman (NYSE: NOC) has successfully demonstrated a space-design protected tactical waveform (PTW) processor that enhances user data rates up to a factor of 20, improves spectral efficiency up to a factor of 4 and provides bandwidth-on-demand to significantly improve warfighter communications in contested tactical environments.

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A photo accompanying this release is available at: <http://media.globenewswire.com/noc/mediagallery.html?pkgid=32122>.

The testing was completed as part of the U.S. Air Force Space and Missile Systems Center's MILSATCOM Design for Affordability Risk Reduction effort with MIT/Lincoln Labs. The processor successfully communicated using the Air Force-developed protected tactical waveform, which builds upon the proven protection features of the Advanced Extremely High Frequency (AEHF) program's extended data rate waveform known as XDR.

Northrop Grumman confirmed the demonstration platform consists of flight-representative technology readiness level six (TRL-6) hardware, firmware and software that can be incorporated into a near-term flight program and provide assured communication and performance to the warfighter.

"While PTW provides substantial new capabilities for the warfighter, a waveform alone does not provide protection," said Tim Frei, vice president, communication systems, Northrop Grumman Aerospace Systems. "The real value of PTW is when it is integrated into an architecture with comprehensive protection including space-based processing, non-commercial frequency bands, crosslinks and other key protection features in the antenna and radio frequency processing chains.

"Northrop Grumman has maximized the value of this contract to the government by treating it not simply as a concept demonstration, but rather as true risk reduction and prototype development consistent with our standard development process for flight units," added Frei. "Each dollar spent developing the demonstration platform for this effort has directly reduced the future cost of an eventual flight unit."

The Northrop Grumman PTW platform demonstrated at the MIT/Lincoln Labs test facility is a fully integrated subsystem with multi-channel demodulators, Ethernet-based packet switching, high-data-rate modulators, and the associated control software. After completing the full suite of government-defined modem tests, the Northrop Grumman team performed additional testing including the connection of multiple terminal emulators in an end-to-end configuration with complete forward and return processing and Ethernet switching. The team also demonstrated how the bandwidth-on-demand software responds to a multi-user loading environment to efficiently use the available spectrum.

Northrop Grumman's investment in the space processor is capable of adding true protection while enabling assured communications capability to the warfighter at greatly reduced program implementation risk, and marks the next steps in advancing military satellite communications.

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