Northrop Grumman Unveils Advanced Pulse Generation Technology with Direct Digital Synthesis for Next Generation Advanced Threats

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BUFFALO, N.Y., Jan. 13, 2014 /PRNewswire/ -- Northrop Grumman Corporation (NYSE: NOC) has finished detailed performance testing on its Advanced Pulse Generator (APG), which represents the next technology evolution for the company's Combat Electromagnetic Environment Simulator (CEESIM) product that is used to test and validate the performance of electronic warfare equipment.

(Logo: http://photos.prnewswire.com/prnh/20121024/LA98563LOGO)

The APG utilizes high speed direct digital synthesizer (DDS) technology to generate radio frequency (RF) waveforms. This DDS-based capability offers industry-leading RF performance and brings significant advantages to the user, including higher modulation sample rates, wider bandwidth intrapulse modulation, higher precision and resolution, and reduced calibration time. The capability also helps reduce RF part count, which leads to reduced cost and increased system reliability.

The APG is an affordable solution that keeps testing capability ahead of next generation receiver test requirements and can be included in new simulator designs or back-fit into any existing CEESIM simulators as an upgrade. The APG is designed with open architecture modularity and flexibility, making it directly adaptable for use in laboratory, anechoic chamber and range applications.

"Our continued investment in the development of such leading-edge technologies as the Advanced Pulse Generator demonstrates our ability to meet our customers' need for next generation advanced threat capabilities and ensures our products are sustainable and adaptable to evolving requirements," said Joe Downie, site director of Northrop Grumman's Buffalo-based Amherst Systems business unit. "The advanced waveform generation, when coupled with our advanced angle-of-arrival modeling and controlled by our state of the art graphical user interface, immediately transforms the CEESIM system into the most powerful, most advanced electronic warfare simulator available."

The Northrop Grumman CEESIM is an advanced technology simulator that generates complex dynamic electromagnetic environments to simulate true-to-war conditions. CEESIM provides angle-of-arrival radio frequency simulation techniques including phase, amplitude and time difference of arrival. The system includes an updated user interface that makes programming complex emitters more intuitive while allowing the operator to customize the interface to suit specific needs.

Northrop Grumman Amherst Systems produces deployable RF and infrared (IR) simulators for use in all elements of closed-loop operational support in the laboratory, anechoic chamber and on test and training ranges at military installations worldwide. The company's simulators test the world's most advanced electronic warfare warning systems, IR/ultraviolet missile approach sensors and radar-warning receivers and jamming systems. All systems are scalable and can be customized to meet customer's specific needs on both the high and low end levels. These simulators verify for users that their sensors are working as effectively as possible and with the most accurate data load.

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