Lockheed Martin Successfully Demonstrates Volume Search Radar Antenna For U.S. Navy's DDG-1000 Program

Lockheed Martin successfully completed an on-time demonstration of the new Volume Search Radar (VSR) antenna for the U.S. Navy's DDG-1000 next-generation destroyer program.

The demonstration represents the completion of a key milestone qualifying the antenna to move on to the next phase of radar testing, which includes interfacing the VSR antenna with the separate Dual-Band Radar signal/data processor and receiver/exciter cabinet that Raytheon is developing for DDG-1000.

"DDG-1000 is delivering huge advancements in capabilities for our Sailors," said Capt. James Syring, the U.S. Navy's Program Manager for DDG-1000. "Through the success of this demonstration, our Sailors will go to sea with great confidence that they will have the surveillance capabilities to take on the most challenging threats."

The VSR is a three-dimensional surveillance radar that searches, detects and tracks missiles, aircraft and unmanned aerial vehicles at long ranges. The most critical components of the antenna are the solid state Transmit/Receive modules, which are multiple-function circuits that transmit signal power over the full face of the radar, receive the reflected radar signal and amplify it for processing. It also includes solid state phase shifters that steer the transmitted beams.

"Success in developing and proving S-band solid state technology is a priority for defeating the threats our Navy will face," said Capt. Sheila Patterson, the Navy's Program Manager for Above Water Sensors. "This marks a critical milestone for naval radar, as well as for the DDG-1000 program. The Navy made a change from L-Band to S-Band for the DDG-1000 VSR early in the program with a very challenging schedule. Lockheed Martin delivered on the challenge, completing the development on time while retiring several new technology risks."

The demonstration testing was conducted at Lockheed Martin's Solid State Near Field Test Facility in Moorestown. The 11,300-square-foot facility for the precision alignment of high-technology radar was built by the company in 2005 partly to support the DDG-1000 program. In addition to this facility, Lockheed Martin recently opened the Joint Solid State Advanced Radar Center to support research, development and integration of future technologies and advanced mission requirements into radar systems.

Following testing in Moorestown, the VSR antenna will be transferred to a land-based test facility in 2007 where it will be further integrated with an X-band antenna -- which is the second band of the DDG-1000 Dual Band Radar -- for testing.

Headquartered in Bethesda, MD, Lockheed Martin employs about 135,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

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