Lockheed Martin Demonstrates New Satellite Range Extension Capability For MDA/Navy Defense Applications

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Lockheed Martin Space Systems Company today announced that it has successfully tested a proof-of- concept system that will extend the range and effectiveness of the U.S. Navy's Cooperative Engagement Capability (CEC) by thousands of square miles.

CEC significantly improves battle force anti-aircraft warfare (AAW) capabilities by integrating the sensor data of cooperating ships and aircraft into a single, real-time, fire-control-quality composite track picture that supports integrated engagements. By simultaneously distributing sensor data on airborne threats to each ship within a battle group, CEC extends the range at which a given ship can engage hostile aircraft and missiles to well beyond its own radar horizon, significantly improving area, local, and self-defense capabilities.

Funded by the Missile Defense Agency and managed by the Naval Sea Systems Command (NAVSEA - PMS465), the CEC Space Systems Integration contract is a joint effort between The Johns Hopkins University's Applied Physics Laboratory (JHU/APL) and Lockheed Martin Space Systems Company, Sunnyvale, Calif. The effort is developing a prototype CEC satellite range extension (SRE) capability using the DoD's Milstar satellite constellation with both anti- aircraft warfare and ballistic missile defense applications. The Milstar constellation provides protected, global communication links for the joint forces of the U.S. military and can transmit voice, data, and imagery, in addition to offering video teleconferencing capabilities.

"This is an example of the transformational, network-centric warfare capabilities the Missile Defense Agency and the Navy are pursuing. Our tests to date confirm the benefit of Milstar satellite communications range extension for CEC's anti-air warfare mission, and we are eager to extend the testing to show benefits to ballistic missile defense, as well," said Doug Graham, vice president, Defensive Systems, Lockheed Martin Space Systems.

Two of three progressively more challenging anti-air warfare/ballistic missile defense virtual engagement demonstrations have been completed at land- based sites using CEC satellite range extension hardware. The team working on the new architecture recently completed the first two tests, which confirmed that CEC with Milstar II satellite range extension enables Aegis cruisers to defend against air breathing threats beyond their own radar horizons.

The tests employed land-based ship simulators to represent two CEC- equipped Aegis cruisers and one CEC-equipped aircraft carrier, and made the first live use of Milstar II's medium data rate (MDR) satellite to provide the equivalent of a ship-based force multiplier. The first test, completed in March 2002, demonstrated an Aegis anti-air warfare cued engagement over the horizon using INMARSAT. In the second test, conducted in October, an Aegis anti-air warfare launch-on-remote and engage-on-remote dual communications network, consisting of the organic CEC Data Distribution System and Milstar II, successfully tracked hundreds of airborne targets.

A third experiment is planned for mid-2003 to demonstrate ballistic missile composite tracking, again using Milstar II.

Lockheed Martin Space Systems Company, headquartered in Denver, Colo., is one of the major operating units of Lockheed Martin Corporation. Space Systems designs, develops, tests, manufactures and operates a variety of advanced technology systems for military, civil and commercial customers. Chief products include a full-range of space launch systems, including heavy-lift capability, ground systems, remote sensing and communications satellites for commercial and government customers, advanced space observatories and interplanetary spacecraft, fleet ballistic missiles and missile defense systems.

Headquartered in Bethesda, Md., Lockheed Martin is a global enterprise principally engaged in the research, design, development, manufacture and integration of advanced-technology systems, products and services. The Corporation's core businesses are systems integration, space, aeronautics, and technology services.

For more information about Lockheed Martin Space Systems, see our website at http://lmms.external.lmco.com/

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