

GPS III And OCX Satellite Launch And Early Orbit Operations Successfully Demonstrated

Lockheed Martin, Raytheon complete key program milestone

NEWTOWN, Pa., Sept. 12, 2013 /PRNewswire/ - Lockheed Martin [NYSE: LMT] and Raytheon Company [NYSE: RTN] successfully completed the third of five planned launch and early orbit exercises to demonstrate the launch readiness of the world's most powerful and accurate Global Positioning System (GPS), the U.S. Air Force's next generation [GPS III](#) satellite and Operational Control System ([OCX](#)).

Successful completion of Exercise 3, on August 1, was a key milestone demonstrating Raytheon's OCX software meets mission requirements and is on track to support the launch of the first GPS III satellite, currently being produced by Lockheed Martin. Two additional readiness exercises and six 24/7 launch rehearsals are planned prior to launch of the first GPS III satellite in 2015.

Using new installments of Raytheon's OCX software and Lockheed Martin's GPS III Launch and Checkout Capability (LCC), the Air Force Global Positioning System Directorate and the industry team completed a launch and early orbit exercise over a three-day period in late July. Exercise 3 demonstrated space-ground communications; first acquisition and transfer orbit sequences; orbit-raising maneuver planning and execution; and basic anomaly detection and resolution capabilities. In addition, the industry and customer teams jointly executed mission planning activities, such as orbit determination and the generation of upload command files.

Exercise 3 expands on two previous exercises, with a longer mission timeline, and the introduction of simulated vehicle and ground anomalies to evaluate the combined response capabilities of the control segment, satellite and operations crew. "Successful completion of Exercise 3 clearly demonstrates that OCX is on track to support the first GPS III satellite launch," stated Matt Gilligan, a vice president with Raytheon's Intelligence, Information and Services business and Raytheon's GPS OCX program manager. "The system responded as designed, and met all of the launch exercise success criteria and successfully demonstrated our anomaly response."

"Exercise 3 demonstrated that the cross-organizational operations team is on track to support successful GPS III launch and on-orbit checkout missions from our Newtown facility. I look forward to the team's continued success as they progress through the complex mission readiness program towards the first GPS III launch," said Keoki Jackson, vice president of Lockheed Martin's Navigation Systems mission area.

The Lockheed Martin-developed GPS III satellites and Raytheon's OCX are critical elements of the U.S. Air Force's effort to modernize the GPS enterprise more affordably while improving capabilities to meet the evolving demands of military, commercial and civilian users worldwide.

GPS III satellites will deliver three times better accuracy; provide up to eight times more powerful anti-jamming capabilities; and include enhancements which extend spacecraft life 25 percent further than the prior GPS block. The GPS III also will carry a new civil signal designed to be interoperable with other international global navigation satellite systems, enhancing civilian user connectivity. The spacecraft bus and antenna assemblies for the first GPS III satellite have been delivered to Lockheed Martin's GPS III Processing Facility and are in the integration and test flow leading to the planned space vehicle delivery in mid-2014.

OCX is being developed in two Blocks using a commercial best practice iterative software development process, with seven iterations in Block 1 and one iteration in Block 2. Exercise 3 was conducted using the recently completed Iteration 1.4 software. Exercise 4, scheduled for early 2014, will use Iteration 1.5 software, which includes the Launch and Checkout System capability as well as all critical information assurance features needed to support launch of the first GPS III satellite.

The GPS III team is led by the [Global Positioning Systems Directorate](#) at the U.S. Air Force Space and Missile



Systems Center. [Air Force Space Command's 2nd Space Operations Squadron](#) (2SOPS), based at Schriever Air Force Base, Colo., manages and operates the GPS constellation for both civil and military users.

About Lockheed Martin

Headquartered in Bethesda, Md., Lockheed Martin is a global security and aerospace company that employs about 116,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration, and sustainment of advanced technology systems, products, and services. The Corporation's net sales for 2012 were \$47.2 billion. For more information about Lockheed Martin and GPS III, visit www.lockheedmartin.com/gps and follow us on Twitter [@LockheedMartin](#)

About Raytheon

Raytheon Company, with 2012 sales of \$24 billion and 68,000 employees worldwide, is a technology and innovation leader specializing in defense, security and civil markets throughout the world. With a history of innovation spanning 91 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems; as well as a broad range of mission support services. Raytheon is headquartered in Waltham, Mass. For more about Raytheon, visit us at www.raytheon.com and follow us on Twitter [@raytheon](#).

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