

Lockheed Submits Proposal GPS III Space Segment

A Lockheed Martin (MD, USA)-led team has submitted its proposal to design and build the U.S. Air Force's next-generation Global Positioning System Space Segment program, known as GPS Block III. This program will improve position, navigation, and timing services for the warfighter and civil users worldwide and provide advanced anti-jam capabilities yielding improved system security, accuracy and reliability.

The proposal builds on the team's proven record of providing progressively advanced spacecraft for the current GPS constellation: the team designed and built 21 Block IIR satellites for the Air Force and subsequently modernized eight of those spacecraft, designated Block IIR-M, to enhance operations and navigation signal performance.

For the GPS III competition, Lockheed Martin Space Systems, with headquarters in Denver, is serving as the Space Segment prime contractor. ITT Corporation will provide the navigation payload, and General Dynamics Advanced Information Systems will provide the Network Communications Element (NCE) which includes the UHF Crosslink and Tracking Telemetry & Command (TT&C) subsystems.

The proposal, submitted on Friday, 24th August, is for the multi-billion dollar Development and Production contract scheduled to be awarded by the Global Positioning Systems Wing, Space and Missile Systems Center, Los Angeles Air Force Base, Calif. in late 2007.

The contract will include eight GPS IIIA satellites with the first launch projected to be available in 2013. Eight GPS IIIB, and 16 GPS IIIC satellites are planned for later increments, with each increment including additional capabilities based on technical maturity.

Lockheed Martin's original GPS III Phase A risk reduction and system definition contract awarded in 2004 recently culminated in a successful System Design Review at its facilities in Valley Forge, Pa. This effort, completed on-schedule, detailed the team's planned architecture and design approach for the system and summarized results of risk reduction efforts as well as the team's highly successful conduct on the Block IIR and IIR-M programs.

When fully deployed, the GPS III constellation will feature a cross-linked command and control architecture, allowing the entire GPS constellation to be updated simultaneously from a single ground station. Additionally a new spot beam capability for enhanced M-Code coverage and increased resistance to hostile jamming will be incorporated. These enhancements will contribute to improved accuracy and assured availability for military and civilian users worldwide.