

GPS III Space Segment Development

A Lockheed Martin-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 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 modernised eight of those spacecraft, designated Block IIR-M, to enhance operations and navigation signal performance.

For the GPS III competition, Lockheed Martin Space Systems 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 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. 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.