



# Backgrounder

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## Boeing Global Positioning System (GPS) IIF

GPS is a space-based, world-wide navigation system providing users with highly accurate three dimensional position, velocity, and timing information 24-hours a day in all weather conditions. Created by the Department of Defense to enhance US military warfighting capability, it is available for use, free of charge, to anyone with a GPS receiver. Since its development, the system has seen a proliferation of use by the civilian community and new applications are continuously being found.

This increased civil and commercial use of GPS, coupled with lessons learned from years of military operations and specific experiences during Operation Desert Storm, Kosovo, Desert Shield and Iraqi Freedom campaigns, drove a desire to modernize the system - augmenting its capabilities while sustaining the current GPS mission. In response to new civil demands and the emerging doctrines of Navigation Warfare, the US Air Force was charged with directing and procuring improvements to the GPS constellation. Boeing was selected to support the Air Force in architecting the future of GPS, guiding the introduction of new capabilities and technologies into the Block IIF to create a modernized satellite.

Fortunately, a key to the original IIF design was to build in growth flexibility to accommodate new or evolving requirements, as well as other upgrades. In addition to sustaining the GPS constellation and control segment, IIF features more capability and improved mission performance. IIF doubles the number of navigation signals that are provided by the present constellation.

Boeing has been the primary contractor for all U.S. Air Force GPS satellites with the exception of the Lockheed Martin Block IIR, which is currently replacing the IIA satellites on a constellation sustainment basis. Boeing is currently under contract to build twelve of the next generation Block IIF and is competing for the future GPS III.

GPS IIF is the product of Boeing's heritage with 40 successful satellites from the GPS Block I and Block II/IIA missions and over 30 years of teamwork with the Air Force,

shaping an architecture that ensures sustainment while augmenting mission performance.

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