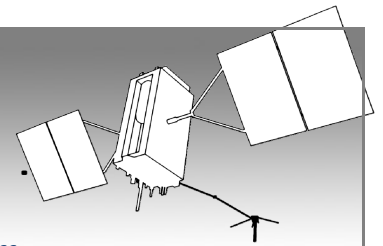


GPS

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Information for Policymakers from the National Coordination Office
for Space-Based Positioning, Navigation, and Timing (PNT)

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First Next-Generation GPS Satellite Successfully Launched Into Orbit

On May 27, the U.S. Air Force launched the first of its next-generation GPS IIF satellites into orbit from Cape Canaveral, Florida. Built by Boeing, the new satellite will be the first to broadcast an operational version of the third civilian GPS signal, called L5. The L5 signal is intended to support safety-critical transport applications, including aviation, as well as new commercial innovations. This was also the first time a GPS satellite launched on a Delta IV Medium rocket, which uses a unique

fuel that produces water vapor as exhaust. To view the launch, visit www.ulalaunch.com.

Defense Authorizers Zero Out iGPS

The House and Senate Armed Services Committees cut \$40.9 million for High Integrity GPS, commonly known as iGPS, in their mark-ups of the fiscal 2011 defense authorization bill (H.R. 5136 / S. 3280). This is the third consecutive year that authorizers have zeroed out the project, which is designed to demonstrate the capability to use Iridium satellites to enhance current GPS navigation and timing capabilities. Despite these cuts, Senate appropriators have always restored funding for the project. H.R. 5136 is currently being debated on the House floor. To check the funding status of iGPS and other GPS-related programs, visit <http://pnt.gov/congress>.

Ten Years of Unfettered Civil GPS Access

On May 1, 2000, at the direction of President Bill Clinton, the U.S. Air Force stopped its intentional scrambling of civil GPS signals, a practice known as Selective Availability (SA). This boosted the civil accuracy of GPS tenfold overnight. A decade later, mobile navigation is a major part of civilian life and has led to an explosion in consumer use of GPS technology, from phone-based applications to geocaching. The United States has no intent to use SA again, and announced in 2007 that the future GPS III satellites will be built without the feature. To learn more about SA, visit <http://pnt.gov/public/sa>.

Application Spotlight: Offshore Oil Disaster Clean-up

GPS technology is playing an integral role with the massive oil spill clean-up efforts in the Gulf of Mexico. NASA, the National Oceanic and Atmospheric Administration (NOAA), and the Coast Guard are using GPS to precisely locate and map the dynamic spill. This helps them calculate the volume of sea-surface oil and predict its movement. Clean-up crews are also depending on GPS to keep track of mobile assets during the complex operation.



BP used GPS in their unsuccessful attempt to place a tall concrete dome one mile down over the leak on the Gulf floor. GPS stabilizers were located on the barge to make sure that it was placed precisely in the right spot.

Currently, scientists at Sarasota, Florida's Mote Marine Laboratory and Aquarium are launching robots equipped to hunt for oil under the surface of the Gulf. The small robots, called Autonomous Underwater Vehicles, use GPS to provide scientists with their exact locations in an effort to locate oil, and the findings are reported to the Coast Guard, NOAA, U.S. Navy, and the Florida Department of Environmental Protection.



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