



Highlights of [GAO-10-447T](#), a testimony before the Subcommittee on Strategic Forces, Committee on Armed Services, U.S. Senate

## Why GAO Did This Study

The majority of large-scale acquisition programs in the Department of Defense's (DOD) space portfolio have experienced problems during the past two decades that have driven up costs by billions of dollars, stretched schedules by years, and increased technical risks. To address the cost increases, DOD altered its acquisitions by reducing the number of satellites it intended to buy, reducing the capabilities of the satellites, or terminating major space systems acquisitions. Moreover, along with the cost increases, many space acquisitions are experiencing significant schedule delays—as much as 8 years—resulting in potential capability gaps in areas such as missile warning, military communications, and weather monitoring. This testimony focuses on

- the status of space acquisitions,
- causal factors of acquisition problems, and
- efforts underway to improve acquisitions.

In preparing this testimony, GAO relied on its body of work, including GAO reports on best practices, assessments of individual space programs, common problems affecting space system acquisitions, and the DOD's acquisition policies. We have made numerous recommendations to the DOD in the past on matters relating to overall best practices as well as on individual space program acquisitions. DOD often concurred with our findings and recommendations and has efforts underway to adopt best practices.

[View GAO-10-447T or key components.](#)  
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## SPACE ACQUISITIONS

### DOD Poised to Enhance Space Capabilities, but Persistent Challenges Remain in Developing Space Systems

#### What GAO Found

A long-standing problem in DOD space acquisitions is that program and unit costs tend to go up significantly from initial cost estimates, while in some cases, the capability that was to be produced declines. This problem persists. However, DOD has made progress on several of its high-risk space programs and is expecting to launch new generations of satellites across various missions over the next 12 months that should significantly advance some capabilities, particularly protected communications and space surveillance. While DOD is having success in readying some satellites for launch, other space acquisition programs currently in development face challenges that could further increase costs and delay targeted delivery dates. Another risk facing DOD space programs over the next few years is the potential for launch delays because of changes being made in the launch sector and an increase in the demand for certain DOD launch vehicles.

Our past work has identified a number of causes for the cost growth and related problems, but several consistently stand out. First, on a broad scale, DOD starts more weapon programs than it can afford, creating a competition for funding that encourages low cost estimating, optimistic scheduling, overpromising, suppressing bad news, and, for space programs, forsaking the opportunity to identify and assess potentially more executable alternatives. Second, DOD has tended to start its space programs too early, that is, before it has the assurance that the capabilities it is pursuing can be achieved within available resources and time constraints. This tendency is caused largely by the funding process, since acquisition programs attract more dollars than efforts concentrating solely on proving technologies. Third, programs have historically attempted to satisfy all requirements in a single step, regardless of the design challenge or the maturity of the technologies necessary to achieve the full capability.

DOD has been working to ensure that its space programs are more executable and produce a better return on investment. Some actions DOD and others have adopted or are pursuing include: the Acquisition Improvement Plan, which lists five initiatives for improving how the Air Force obtains new capabilities; changes in cost estimating that are in line with earlier GAO recommendations; and the Weapon Systems Acquisition Reform Act, which was signed into law in May 2009. However, there are still significant changes to processes, policies, and support needed to ensure reforms can take hold. Recent studies and reviews that have examined national security space have all found that diffuse leadership has a direct impact on the space acquisition process, primarily because it makes it difficult to hold any one person or organization accountable, and there is no single authority to resolve conflicts among the many organizations involved in space programs. Moreover, DOD continues to face gaps in critical technical and program expertise for space. Until both issues are resolved, commitment to reforms may not be sustainable.