November 2010

SPACE ACQUISITIONS

Challenges in Commercializing Technologies Developed under the Small Business Innovation Research Program

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Highlights

Highlights of GAO-11-21, a report to congressional requesters

Why GAO Did This Study

To be competitive in the global economy, the United States relies heavily on innovation through research and development (R&D). The Small Business Innovation Development Act of 1982 established the Small Business Innovation Research (SBIR) Program to stimulate technological innovation among small businesses. SBIR offers one avenue for introducing technological innovation in the Department of Defense (DOD) space sector. GAO was asked to assess (1) the extent to which DOD is utilizing the SBIR program to develop and transition space-related technologies; and (2) whether small businesses face challenges to participating in the space industrial base. To do this, GAO analyzed program documentation and DOD data on the SBIR program and interviewed key officials.

What GAO Recommends

GAO recommends that DOD consider collecting data on all SBIR technologies that transition into DOD acquisitions or the commercial sector and ensure these data are defined and recorded consistently; complete efforts to develop and issue SBIR program guidance; and review the challenges identified by stakeholders in this report to assess the extent to which there are improvements that could be made to address them. DOD partially concurred to collect data, and concurred to develop and issue guidance. DOD did not agree to review the challenges identified by stakeholders. GAO believes this recommendation remains valid.

View GAO-11-21 or key components. For more information, contact Cristina Chaplain, (202) 512-4841, chaplainc@gao.gov.

What GAO Found

DOD is working to commercialize space-related technologies under its SBIR program by transitioning these technologies into acquisition programs or the commercial sector, but has limited insight into the program's effectiveness. DOD has invested about 11 percent of its fiscal years 2005–2009 R&D funds through its SBIR program to address space-related technology needs. Also, DOD is soliciting more space-related research proposals from small businesses. For example, the number of space-related research requests submitted by the military services and DOD components has increased from less than 8 percent in 2005 to nearly 14 percent in 2009. Further, DOD has implemented a variety of programs and initiatives to increase the commercialization of SBIR technologies and has identified instances where it has transitioned space-related technologies into acquisition programs or the commercial sector. For example, a small business developed an aluminum ring that enables multiple payloads to attach to a single launch vehicle. However, DOD lacks complete commercialization data to determine the effectiveness of the program in transitioning space-related technologies into acquisition programs or the commercial sector. Of the nearly 500 space-related contracts awarded in fiscal years 2005 through 2009, DOD officials could not, for various reasons, identify the total number of technologies that transitioned into acquisition programs or the commercial sector. For example, there are inconsistencies in recording and defining commercialization. Further, there are challenges to executing the SBIR program that DOD officials acknowledge and are planning to address, such as the lack of overarching guidance for managing the DOD SBIR Program.

Most stakeholders GAO spoke with in the space industrial base—DOD, prime contractors, and small-business officials—generally agreed that small businesses participating in the DOD SBIR program face difficulties transitioning their space-related technologies into acquisition programs or the commercial sector. Although GAO did not assess the validity of the concerns cited, stakeholders GAO spoke with identified challenges inherent to developing space technologies, challenges because of the SBIR program's administration, timing, and funding issues and other challenges related to participating in the DOD space acquisitions environment. For example, some small-business officials said that working in the space community is challenging because the technologies often require more expensive materials and testing than other technologies. They also mentioned that delayed contract awards and slow contract disbursements have caused financial hardships. Additionally, several small businesses cited concerns with safeguarding their intellectual property.