BUSINESS INNOVATION SYMPOSIUM (E6)
Encouragment of Government Purchasing from Commercial Providers: Models and Examples (1)

Author: Mr. Douglas Comstock
National Aeronautics and Space Administration (NASA), United States, doug.comstock@nasa.gov

Mr. Charles Miller
National Aeronautics and Space Administration (NASA), United States, Charles.Miller@nasa.gov
Mr. Andrew Petro
National Aeronautics and Space Administration (NASA), United States, Andrew.J.Petro@nasa.gov

RESULTS AND PLANS FROM NASA'S FAST AND CRUSR PROJECTS.

Abstract

Through the Commercial Reusable Suborbital Research (CRuSR) project and the Facilitated Access to the Space environment for Technology (FAST) project, NASA provides flight opportunities for science, technology development and education efforts to reduced-gravity environments, brief periods of weightlessness, and high-altitude atmospheric research. To do this, NASA purchases commercially available services from the private sector.

The FAST project provides opportunities for emerging technologies to be tested in the space environment thereby increasing their maturity and the potential for their use in NASA programs and in commercial applications. FAST focuses on testing technologies on parabolic aircraft flights that can simulate microgravity and the reduced gravity environments of the Moon or Mars. The FAST project promotes the growth of emerging commercial space services by employing competitively selected private reduced gravity flight services. In 2008, an initial set of FAST reduced gravity flights were accomplished with five SBIR companies. In 2009, 19 FAST-sponsored technology projects were flown during a flight week with two days of microgravity and two days of lunar gravity. The projects came from private companies, universities, government laboratories and partnerships among those entities. In 2011, NASA expects to fund up to four flight weeks for technology demonstration and research, allowing many more projects to benefit from the use of reduced gravity aircraft flights.

CRuSR is being established to purchase commercial available suborbital flights that will yield many benefits to NASA by providing access to 3-4 minutes of microgravity for experimentation, discovery and testing. Results are expected to reduce the risk for use of new technologies in future missions by demonstrating application in the space environment, providing for routine recovery of payloads and frequent flights. As commercial suborbital capabilities become available, the CRuSR program will competitively secure flight services for experiment payloads supporting NASA's objectives in science, technology and education. CRuSR will also help foster the development of the commercial reusable suborbital transportation industry, an important step in the longer-term path that envisions suborbital RLVs evolving to provide the Nation with much lower-cost and much more reliable access to orbital space.