The Challenge and Opportunity of Frequent Affordable Access to Space

Transporting a payload into space currently takes years of lead-time and costs a great deal. Despite those barriers, the unique nature of space has dictated that some space applications conducted in, from and through space have become essential to our nation. Growing dependency on these space-based assets has led U.S. policymakers not only to support baseline investments in traditional space launch systems, but also to pursue transformational capabilities to replace or supplement those assets in a more timely and affordable way. Some call this Operationally Responsive Space (ORS).

ORS' potential includes myriad applications of space implicit in the ability to transport people or payloads to and from space, or through space to anywhere on the earth within 90 minutes. There are countless situations that would benefit from the ability to move personnel and materiel to, from, and through space on short notice and at relatively low cost. Given the war on terror and the transition away from state-based actors, such situations are becoming increasingly common.

Advances in the technology of transportation have revolutionized the way that wars are fought and won before, and will do so again. The only question is whether the U.S. will be the nation to lead, and fully benefit from, this revolution.

U.S. Entrepreneurs are Developing New Capabilities with Little Government Help

Today, entrepreneurial U.S. companies are investing significant private capital to make this space transportation revolution a reality. They have operated to date largely disconnected from the existing U.S. government research and development establishment. Early results are encouraging – in 2004 Scaled Composite's SpaceShipOne launched human beings into suborbital space for a fraction of the time and money of a traditional aerospace development effort. XCOR's EZ-Rocket has demonstrated routine operations (hours between flights in front of the X Prize Cup airshow crowd) of a reusable rocket-propelled vehicle. SpaceX has nearly completed development of a wholly new orbital launch vehicle in less time and cost than a government-led effort would take. Numerous other companies have the funding and customers to develop a broad range of new space transportation capabilities.

Of course, the Entrepreneurial Space Transportation industry hasn't succeeded yet. But when some of these firms do succeed, the space access revolution they produce will dramatically benefit U.S. national security, economic competitiveness, and create a vibrant new aerospace industrial base and talent pool that will pay off for generations.

The U.S. Government Can Accelerate and Help Focus this Progress at Little/No Cost

Most of these companies are currently focused on commercial applications for their systems, rather than national security needs. However, the U.S. government could easily encourage these companies to rapidly develop capabilities that are equally applicable to military requirements - in many cases without spending any new money. This "alignment" of private and public goals offers policymakers the leverage of the private capital and effort already being invested by this industry. Some of the ways that the government can ensure that these private investments generate maximum public benefit are:

- Direct the DOD (and other U.S. Government agencies) to develop outreach and feedback mechanisms to gain greater insight into the Entrepreneurial Space Transportation (EST) industry's capabilities and plans.
- Confer with the EST industry to ensure that government technology research plans will intersect with their probable future needs.
- Spend some minimum fraction of DOD (and other U.S. Government agencies) space transportation research funding on technologies that will have broad common utility for the EST industry and the DOD.
- Direct DOD (and other U.S. government agencies) to develop and utilize purchasing and acquisition methods such as prizes, Other Transactions Authority agreements, and pay for delivery contracts to stimulate the growth and innovation of the EST industry.
- Publish an annual report to Congress on the progress of U.S. Government efforts to gain leverage from the private technology and capability investments of the EST industry.
- Support a regulatory regime that encourages rather than inhibits the development of commercial human spaceflight - for example streamlining or removing such barriers to success as ITAR and liability.
- Create a National Space Access Advisory Committee, to be comprised of leaders of the EST industry and the relevant decision makers in government, to guide and accelerate these and subsequent federal efforts.

This document reflects the consensus of over two dozen entrepreneurial space transportation industry leaders and experts. Organizations represented in the development of, and officially supporting, this consensus statement include: Citizens' Advisory Council on National Space Policy, National Space Society, ProSpace, Space Access Society, Space Frontier Foundation, Space Studies Institute, SubOrbital Institute, XPrize Foundation, AirLaunch LLC, Andrews Space & Technology, Armadillo Aerospace, Charles Lurio Consulting, Conceptual Research Corp., HMX, Inc., I Quadrant Investments LLC, Interglobal Spacelines, Masten Space Systems, Microcosm, National Aerospace Development Center, PoliSpace, Rocketplane LLC, Space Available LLC, Space Exploration Technologies Corp. , Universal Spacelines, XCOR Aerospace, and X-Rocket LLC.