2013 AIAA National Policy Issues

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2013 AIAA National Policy Issues

- Promoting and Incentivizing Public/Private Partnerships that Improve Technology Transition to End Users
- Enabling Sustained Deep Space Exploration with a Broad Vision
- Completing Public/Private Human Earth-Orbit Access Programs
- Recruiting, Retaining, and Developing a World-Class Aerospace Workforce
- Building Our Competitive Foundation: Supporting K-12 STEM Education
- Assuring the Viability of the US Aerospace and Defense Industrial Base
- Lessening the Impact of Export Controls on the Domestic Aerospace Industry.
- Accelerating the Integration of UAV/UAS into the National Aerospace System
- Adopting a Robust and Integrated Cybersecurity Policy as One of Our Top National Security Priorities
- Ensuring the Stimulation of Advancements in the Nation's Science & Technology Portfolio by Removing Restrictions on Federal S&T Professionals to Participate in Peer Review and Open Forums

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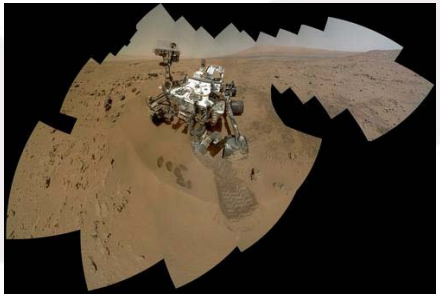
Enabling Sustained Deep Space Exploration with a Broad Vision

Background

- Human and robotic exploration beyond Earth orbit has great scientific, technological, and cultural significance
- Leadership inspires STEM careers and technology advancements with economic, national security, and social benefits
  - Sustaining leadership requires on-going achievements in which each generation can take some ownership
- Continued exploration success requires that the following challenges be tackled cost-effectively
  - Reliable and progressively more capable transportation
  - Fully synergistic human and robotic operations
  - Means to counter adverse effects on humans of space radiation and micro-gravity de-conditioning
  - Power generation to meet deep space exploration needs
- Resources made available for deep space exploration must be wisely applied toward well-conceived goals

The Orion Vehicle will support resumed human operations beyond Earth orbit

NASA's Space Launch System (SLS) will evolve to enable progressively more ambitious missions



The long-term goal is to add footprints to the rover tracks already on Mars

Pictures Courtesy NASA

Enabling Sustained Deep Space Exploration with a Broad Vision

Recommendations

- Address both fundamental science and human aspirations
  - Pursue long-term, visionary objectives
  - Have meaningful milestones every decade that each result in significant achievements
- Complete development of launch systems that enable human access beyond low Earth orbit
- Continue to allocate resources to advancing in-space propulsion
  - Enable more efficient cargo delivery
  - Facilitate faster human crew transits
- Apply synergistic robotic/human capabilities to push the exploration envelope
- Develop a spectrum of power generation technologies for deep space missions
  - Resume Pu-238 production to power future outer-planet missions - combine this with advanced Stirling-cycle radioisotope generators that use much less Pu-238
- Fully address radiation and micro/partial gravity challenges that impact human deep space missions
  - Investigate counter measures and mitigation methods
- Pursue productive international collaborations
  - Sustain US exploration leadership in key areas including for technologies with national security benefits

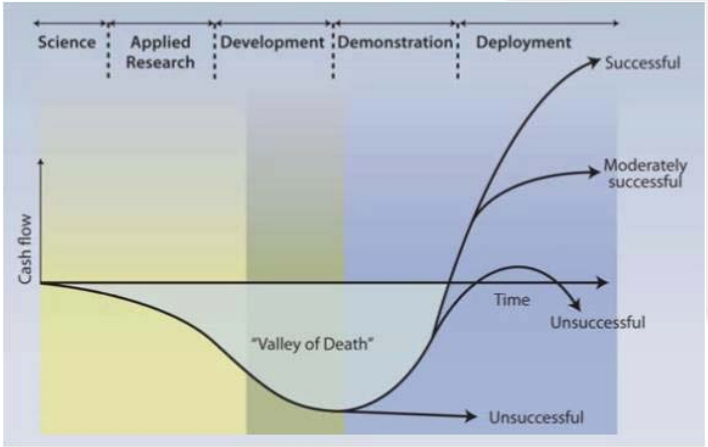
Background

- "Partnerships and interconnectedness are keys to competitiveness in the future…we need to create an environment and the incentives that will foster private-public partnerships"*
- Need to reduce transition time from technology demonstration to operational capability.
- Lack of commercialization knowledge by NASA program managers**
- Need for more integrated NASA research activity leading to flight verification***

*President's Commission on Aerospace, 2002
** NASA Inspector General's report
***National Academies report on flight research

Promote and Incentivize Public-Private partnerships that Improve Technology Transition to End Users from the Nation's Aerospace Research Laboratories

- Technology often not sufficiently matured for transition to industry
- Industry needs incentives to adopt government-funded R&D
- OSTP seeking meaningful dialogue with Industry
- Congress needs to address the "Valley of Death"



Graphic reprinted from CA Energy Commission report

Promote and Incentivize Public-Private partnerships that Improve Technology Transition to End Users from the Nation's Aerospace Research Laboratories

Recommendations

- Direct Administration to develop a Federal agency/private aerospace stakeholders partnership to develop and maintain a technology transition plan
- Devote Congressional oversight to addressing challenges identified by stakeholders
- Develop a subcommittee of the Aerospace Caucus focused on aviation with initial focus on technology transition

Ensuring the Advancement of Science & Technology through Open Exchange and Peer Review of Research

Background

- Office of Management & Budget Memorandum (OMB) M-12-12, "*Promoting Efficient Spending to Support Agency Operations*"
  - In response to the 2010 General Service Administration (GSA) Western Regional Conference Scandal and to the 2011 Budget Control Act (BCA) "Sequester" provisions.
  - Limits travel-related spending for FY2013-16 to 70% of FY2010 levels at all federal departments & agencies.
  - Requires Deputy Secretary level approval for all conference spending in excess of $100K.
  - Prohibits conference expenses from exceeding $500K for a single conference.

Ensuring the Advancement of Science & Technology through Open Exchange and Peer Review of Research

- Department of Defense (DoD) Memorandum, "*Handling Budgetary Uncertainty in Fiscal Year 2013*" (Ash Carter)
  - In response to the 2011 Budget Control Act (BCA) "Sequester" provisions and the lack of an FY2013 Defense Appropriations Act.
  - Directs DoD offices to "Curtail travel, training and conferences…including those required to maintain professional licensure or equivalent certifications."

Ensuring the Advancement of Science & Technology through Open Exchange and Peer Review of Research

- HR 313, the "*Government Spending Accountability Act of 2013*"
  - Introduced by Congresswoman Jo Ann Emerson (introduced the bill on 18 JAN and resigned from Congress on 22 JAN).
  - Limits spending by agencies to <$500K in support of a single conference.
  - Limits department and agency travel expenses for FY2014-18 to 70% of aggregate amount of FY2010 expenses.

Ensuring the Advancement of Science & Technology through Open Exchange and Peer Review of Research

- Empirical Evidence of Impacts (aerospace)
  - MDA canceled their sponsorship and support of AIAA's annual Missile Defense Conference scheduled for March
  - Space Foundation canceled their annual Pacific Region Space Leadership Conference
  - American Helicopter Society canceled their biennial Helicopter Military Operations Technology Conference last fall.
  - American Astronomical Society canceled their Annual Meeting last fall.

Ensuring the Advancement of Science & Technology through Open Exchange and Peer Review of Research

Recommendations

- Congress provide exemptions from legislative and Administration restrictions on travel for professionals within the federal workforce to participate in technical conferences where attendance promotes the interest of the agency and the professional development and technical competency of government scientist.
- Exemption should allow for peer participation in open exchange and dissemination of results and developments which accelerate the advancement of discoveries, capabilities and techniques.

The World's Forum for Aerospace Leadership