

Ensuring the Continuing Stimulation of Advancements in the Nation's Science and Technology Portfolio by Removing Restrictions on the Federal Science and Technology Professional Workforce to Participate in Peer Review and Open Forums

An AIAA Information Paper

ABSTRACT

On May 11, 2012 the Office of Management and Budget released OMB Memorandum M-12-12, *Promoting Efficient Spending to Support Agency Operations*¹, in response to General Services Administration travel abuses. OMB M-12-12 broadly and severely limits travel for all federal employees to professional conferences without regard to the purpose of the travel, or the content of the program. However, this conflicts with the December 17, 2010 Office of Science and Technology Policy memo, *Scientific Integrity*², which recognizes the importance of participation in professional conferences to advance the state of the nation's science and technology portfolio. Federal employee participation in these professional meetings allows interaction with their colleagues from other agencies, our military's science directorates, universities, and industry to help facilitate technology transfer and intellectual exchanges central to their jobs and the national interest. The proposed new policies will have a chilling effect on scientific discovery and engineering advancement, thereby damaging our nation's unique innovation engine, which is a major contributor to job creation, economic growth, our global competitiveness, and our national security.

ISSUE BACKGROUND

Collaboration and idea exchange play a critical role in advancing science, engineering, and technology. Meetings involving the presentation of peer-reviewed papers and other working-level exchanges serve not only the federal workforce but also the broader economic and national security goals of the nation. These events support the investments made in military and civilian technology, federal intellectual property, scientific research endeavors, and engineering development that are crucial for future technological innovations. They also ensure that federal employees are able to make the best possible use of taxpayer dollars. Additionally, the open exchange of ideas between national policymakers and thought leaders from industry and academia helps to create policies and programs that maximize the impact of investments in research, development, testing, and evaluation, and to ensure that those investments support national goals of economic growth and national security. If restrictions on travel to legitimate professional meetings are too onerous, a significant unintended consequence will be the harm done to the progress of science and technology, and to our national interest.

Unlike many professions, the nature of work for an acquisition expert, scientist, engineer, or technology professional requires a sharing of research findings and collaboration on policy issues with peers and colleagues at conferences and meetings. This peer collaboration process, fundamental to scientific advances and engineering development, is unlikely to be achieved without this interaction. The benefits of collaboration and idea exchange have been extensively recognized in national security, space exploration, climate monitoring, aeronautics development, energy, health sciences, and other fields of endeavor from which the nation has benefited over many years.

Academia, government, and industry each have their own mindsets and approaches to solving problems – academia optimizing and capitalizing on small technological advances that can feed into bigger systems, government focusing on the larger overwhelming problems, and industry honing efficiency. An academician approaches a problem much differently than a practicing engineer, and a government scientist/engineer has a different lens than someone driven by business motivations. Each worldview has merit, and their synthesis fosters a true culture of innovation. The intersection of different approaches sparks new insights for all involved, and even slight shifts of perception can lead to major breakthroughs. Thus, each sector helps support U.S. technological progress – and when these three distinct sectors work together synergistically, the U.S. innovation engine works most effectively. Innovation does not happen in a vacuum.

The purpose of scientific and engineering conferences is to provide an environment for just this kind of dialogue: the interaction of various viewpoints to facilitate innovation. They serve as a nexus of scientific, engineering, and technological communication across academia, industry, and government. Information exchange through scientific and

¹ Executive Office of the White House Office of Management and Budget, Jeffrey D. Zients-Acting Director; [OMB Memorandum M-12-12, Promoting Efficient Spending to Support Agency Operations](http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-12.pdf); 2012

<http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-12.pdf>

² Executive Office of the White House Office of Science and Technology Policy, Dr. John P. Holdren- Director; [Scientific Integrity](http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf); 2012; <http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>

technical conferences happens three times as fast as through published journals, leading to more rapid innovation. When diverse experience bases and habits of mind come together, new solutions to big problems can arise, even out of casual discussions. It is impossible to “know what you don’t know” – which often is the key missing piece of information that causes the sudden shift in perception or understanding that can lead to a new and innovative approach. Simply by being in the environment, surrounded by bright people with great ideas, it is impossible for an individual not to have previously held ideas challenged, forcing thought processes to adapt, and redefining perspectives.

However, this beneficial synergy, which fuels U.S. innovation and supports our economic prosperity and national security, faces a new threat as a consequence of current policy on federal travel to conferences. OMB M-12-12 reduces overall travel support by 30 percent, requires special approval for more than \$100,000 to be spent for agency participation in any conference, reduces the ability to share lessons learned by government scientists and engineers by limiting the number who are able to participate in high value conferences, and requires a new infrastructure to be established to decide which few can attend a conference.

These directives are already resulting in an unintended consequence – the suppression of the open exchange of scientific and technical research and industry and government best practices that fuel the advancement of technology that is vital to national security and economic interests, and to improving the human condition. This new policy is being interpreted to severely limit, and often completely prohibit, participation by government scientists, engineers, and other specialized experts in pertinent conferences. Meetings, conversations, and technical networking events that focus on investments and directions in the U.S. technological landscape are being handicapped as a result of a missing sector, the government. The collaborative process, so important for advancements in science, engineering, and technology, is crippled when significant sectors are unable to participate in technical conferences. Likewise, federal employees in science and engineering areas fall behind in their understanding of the “state of the art,” impairing their ability to best serve the national interest.

In January, Deputy Secretary of Defense Ashton Carter released a memorandum outlining DoD policy with regards to the federal budget sequestration plan that included a directive to “Curtail travel, training, and conferences (all with exceptions for mission-critical activities including those required to maintain professional licensure or equivalent certifications)³. DoD directorates have already begun executing this directive and are actively withdrawing travel and support for contracted conferences and symposium.

Program managers often use technical conferences as an opportunity to engage with a wide range of researchers for peer review, program reviews, and future program planning, and to efficiently examine a large sample of independent research projects. Because the alternative is multiple visits to individual research laboratories, this approach represents a significant savings of both cost and time. While part of the intent of these directives is to provide cost savings as an austerity measure in response to the Budget Control Act’s sequestration provisions, in actuality the directives may actually increase program costs for federal researchers.

³ U.S. Department of Defense, Ashton Carter – Deputy Secretary of Defense; [Memorandum on Handling Budgetary Uncertainty in Fiscal Year 2013](http://contractingacademy.gatech.edu/wp-content/uploads/2013/01/Budgetary-Uncertainty-Memorandum-Ashton-Carter-01.10.2013.pdf); 2013 <http://contractingacademy.gatech.edu/wp-content/uploads/2013/01/Budgetary-Uncertainty-Memorandum-Ashton-Carter-01.10.2013.pdf>