

CONGRESSMAN JIM BRIDENSTINE

STATEMENT FOR THE RECORD

FY 2017 DEFENSE APPROPRIATIONS - MEMBERS DAY

HOUSE APPROPRIATIONS SUBCOMMITTEE ON DEFENSE

TUESDAY, MARCH 15, 2016

**Introduction**

Chairman Frelinghuysen, Ranking Member Visclosky and distinguished members of the subcommittee. Thank you for the opportunity to testify on four space initiatives for fiscal year 2017 national security appropriations. I am member of both the Armed Services Subcommittee on Strategic Forces and Science Subcommittee on Space. Thus, my oversight work involves national security, civil, and commercial space programs and issues. As a Navy pilot, and combat veteran of Iraq and Afghanistan, I have also experienced firsthand the essential role that space systems play across the range of military operations and spectrum of conflict. Let me set the context for my four proposals.

The space domain is radically changing. During the Cold War, space was a sanctuary with two big players – the United States and the Soviet Union – each possessing a small number of assets primarily used for overhead monitoring and nuclear missions. Now, space is increasingly congested, contested, and competitive. We live in a world of college students launching cubesats. A world of global satellite communications. A world of GPS on our smart phones. Unfortunately, this new world is increasingly characterized by active hostile operations against the United States, our allies, and increasingly our commercial companies in space.

In this new environment, the Department of Defense (DOD) must access, acquire, operate, and sustain space capabilities in fundamentally new ways. With limited exceptions, we must change the standard DOD paradigm of procuring, owning, and operating billion-dollar Battlestar Galactica behemoth systems delivered behind schedule and way over cost. Our current space architectures are

stovepiped, vulnerable, and expensive. Our next-generation space architectures must be integrated, resilient, and affordable. My four requests help move DOD toward these objectives through starting new or supporting existing innovative programs.

### **Commercial Weather Data Pilot Program**

First, this Subcommittee should consider appropriating a modest amount in Air Force RDT&E to establish a Commercial Weather Data Pilot program. In comparison to the \$10.0 million necessary for this pilot program, the Air Force's FY17 budget requests \$119.0 million to begin a Weather System Follow-On (WSF) program largely to replace the legacy DOD weather system. WSF will not launch until 2022, despite plans to spend half a billion dollars developing it over the next five years. WSF is also not planned to meet the Department's top two validated weather requirements. Instead, DOD plans to rely on civil and international partners to address its most significant requirements.

In the near-term, the pilot program could test, validate, and ultimately purchase commercial weather data and services to augment and complement existing data sources, thus enhancing the quality of models and forecasts. Over time commercial weather solutions could take a larger, if not primary, role in addressing some defense weather requirements. This is what happened when DOD and the Intelligence Community started to leverage commercial imagery – buying data and services, rather buying, owning, and operating custom systems.

The Subcommittee should follow the precedent set by the FY16 Appropriations Act, which included \$3.0 million to jumpstart a Commercial Weather Data Pilot program at the National Oceanic and Atmospheric Administration (NOAA). My proposal would apply the NOAA program to DOD for a modest startup cost. Multiple companies are already building and launching constellations of small weather satellites with private funding to serve customers in industries ranging from agriculture, to energy, to insurance. DOD would benefit from access to data and services available for the commercial marketplace.

### **Small Venture Class Launch Services**

Second, this Subcommittee should consider appropriating \$27.6 million in Air Force RDT&E to fund a competitively awarded Venture Class Launch Service program. This request takes another successful non-DOD initiative – supported by the Appropriations Committee – and replicates it inside the Department of Defense. NASA’s Venture Class Launch Service (VCLS) program has awarded three contracts to launch small satellites in support of earth science missions. Venture Class launches provide a rapid and relatively inexpensive way to get small satellites into Low Earth Orbit; dedicated small launch services offer an alternative to the “rideshare” model whereby small satellite operators must “hitch a ride” as secondary payloads on larger rockets when space is available.

A robust small launch vehicle industrial base will enhance the resilience of future space architectures. The ability of space systems to take a punch, recover or reconstitute, and carry on delivering mission-critical capability has a huge deterrent effect on any adversary considering extending conflict into space.

Electronics miniaturization fits the same capability into smaller packages. Think about the brick-sized first-generation cell phones versus today’s smartphones. The same principle applies to space systems. Smaller, more powerful electronics reduce size, power, and weight power requirements. Smaller, lighter satellites, in turn, can be launched on smaller launch vehicles which have shorter production timelines and lower costs. Cheaper and faster launch allows DOD to place a larger number of assets into space, augmenting the current architectures and making the overall system more survivable. An army of small launch vehicles can rapidly launch new assets or reconstitute destroyed or degraded space assets ensuring the adversary reaps minimal gains from attacking our space capabilities.

### **Space and Missile Systems Center SATCOM Pathfinder Program**

Third, this Subcommittee should support the President’s Budget Request for the Air Force Space and Missile Systems Center (SMC) Satellite Communications (SATCOM) Pathfinder program. SMC is the Air Force’s space procurement entity. The PB requests \$30.0 million to fund Pathfinder 3, the third in a series of five initiatives. The FY 16 Appropriations bill increased Pathfinder by \$26.0 million to keep the program on track. I must applaud Congresswoman

Betty McCollum, a member of this Subcommittee, for her steadfast support for Pathfinders.

DOD relies heavily on commercial SATCOM (COMSATCOM) providers to meet about 80% of its requirements. The demand for SATCOM is seemingly insatiable; high-level commanders to privates on patrol want better connectivity and more intelligence, surveillance, and reconnaissance data. However, DOD buys COMSATCOM capacity in the most inefficient way possible: annual spot-market contracts funded mostly through OCO. SMC Pathfinders demonstrate innovative ways to purchase COMSATCOM. Rather than purchase capacity, Pathfinders buy “hardware”. Pathfinder 1 bought an entire on-orbit satellite at a bargain price to provide desperately needed capacity over Africa. Subsequent Pathfinders will buy transponders on commercial satellites prior to launch; DOD will then “trade” these transponders for access to a commercial operator’s entire global constellation of capacity. In effect, DOD makes a small upfront investment, but gets global access to an existing constellation.

### **Enterprise Ground Services**

Finally, this Subcommittee should support the \$20.0 million Air Force request for Enterprise Ground Services (EGS). Future space architectures must be resilient **and** integrated. While satellites get the headlines, ground segments are the workhorses which process and transmit data and command and control the satellite. Today’s ground systems are custom-built and stovepiped which prohibits automated and efficient data sharing. A common operating picture is impossible if ground systems are walled off from each other.

EGS will develop common standards and interfaces for ground systems for protected communications, GPS, missile warning and weather. After developing the common baseline, EGS will insert hardware packages – essentially a common operating system - which will provide that common operating picture. Commonality and automation will reduce the sustainment costs and free up space warriors to focus on the warfighting mission.

### **Conclusion**

The space environment has shifted decisively from Cold War sanctuary to an increasingly congested, contested, and competitive theater of ongoing military operations. The Subcommittee can help DOD adapt to this fundamentally new domain through supporting the four innovative initiatives which I have discussed. Future space architectures must be integrated, resilient, and affordable. Establishing a commercial weather pilot program would improve the quality of forecasting and prediction provided to the warfighter. Fostering the small launch vehicle industrial base would enhance options for rapid launch and reconstitution. Supporting the SMC SATCOM Pathfinders would provide more access to global capacity at lower costs. Finally, supporting Enterprise Ground Services would enhance integration among ground systems for our most vital space assets.

I thank the Subcommittee for the opportunity to testify this morning and look forward to continued engagement.