

Chairman Brian Babin

*Remarks to the 20th Annual FAA Commercial Space
Transportation Conference*

Ronald Reagan Center
(1300 Pennsylvania Ave NW, Washington, DC 20004)

Tuesday, February 7th, 2016
3:00 p.m.

Good afternoon. Thank you for inviting me to speak today at the 20th Annual FAA Commercial Space Transportation Conference. This is my second time speaking at this conference and I am very excited to be back.

I also want to welcome staff from FAA's Air Traffic Organization. I understand they are getting up to speed on the good work the AST is doing. I serve on both the Science and Transportation Committees so I look forward to better understanding the roles and responsibilities FAA envisions

going forward for space, and how we can ensure we don't create duplication.

There are two topics I would like to discuss with you this afternoon: our obligations under international law related to space, and space traffic management.

Let's first discuss our international obligations, specifically the question of authorization and supervision of "non-traditional" space activities.

The Outer Space Treaty celebrated its 50th anniversary just two weeks ago. It was negotiated at the height of the Cold War and reflected two very distinct philosophies – communism and liberty. The Soviet Union sought to prevent any non-state actors from operating in space, a position that suited communism since the state was in control of the vast preponderance of society

already. The United States, however, argued that space should be free for exploration and use by all, including the private sector and individuals. Fortunately, the United States' position was accepted and we were able to reap the benefits of private sector investment and innovation in outer space.

For instance, Article 1 states that “[o]uter space, including the moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.” Article 6 goes on to state that, “[t]he activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.” These two seemingly

contradictory clauses – one allowing for the free exploration and use of space, and one requiring authorization and supervision for the private sector to explore and use Outer Space – are actually just as workable today as they were in 1967.

This is because Article 6 establishes responsibility for States Parties to ensure that national activities, including those undertaken by the private sector, are in accordance with Treaty. It does not qualify to the States how or to what extent a State must authorize and supervise. There is flexibility afforded to the States in determining the domestic implementation of assuring private sector activities are carried out in conformity with the Treaty.

The most obvious manifestation of “authorization and supervision” are expansive regulations. While some may see this as the easiest way to “check the box” on satisfying our international obligations related to Article 6, I would challenge all of you to explore more creative solutions.

The regulatory path is fraught with uncertainty, beholden to the whims of unelected bureaucracies, and unresponsive to the needs of a rapidly innovating field. There are a multitude of other constructs that can satisfy our obligations without stifling innovation or smothering the embers of creativity. Statutorily approved activities, standards-setting bodies, self-regulating organizations, public-private partnerships, tort law, and many other solutions should all be considered.

While the medium of space and the activities under considerations may be unique, the policies we are debating are certainly not new. In the late 19th century, the United Kingdom and the United States adopted “Red Flag Traffic Laws” in order to regulate early automobiles. Also known as “Locomotive Acts,” as automobile closely resembled trackless trains at the time, these premature attempts to regulate an emerging technology were premature and ill-conceived.

One law in Pennsylvania breezed through the legislature unanimously in 1896. When any motorist encountered cattle or livestock, the law required the motorist to 1) immediately stop the vehicle, 2) “immediately and as rapidly as possible...disassemble the automobile,” and 3) “conceal the various components out of sight, behind nearby bushes” until the

livestock calmed down. The law was eventually vetoed by the Governor, but the case does illustrate the larger point I am trying to make here – that the management of nascent technologies is often done haphazardly. If done prematurely, without due regard to the state of the technology, or without the larger goal of advancing innovation, regulations and laws could have a crippling effect on the sector. This raises the question, could we be better served by exploring alternative constructs to “authorization” and “supervision,” such as blanket statutory authorizations for classes of activities and enforcement of existing international and domestic requirements for registration and notification to satisfy “supervision.”

If there is one theme I want you to walk away from here with, it is this: the government’s role isn’t to give you

permission to do something. The government's role should be limited to only those areas that require its intrusion, which is a high bar. The burden of proof shouldn't be on the individual to demonstrate the "right" to act; the burden of proof should be on the state when it seeks to restrict liberty. This isn't simply a philosophical question; it is also a question of economics. Other states stand willing to challenge U.S. leadership in space through regulatory competition. In a global environment, individuals and companies are free to shop for the most attractive environment to claim as "home."

The **consequences** of this choice go far beyond national pride. When space operators associate themselves with a particular state, they bring jobs, economic growth, and tax revenue. They attract the best and brightest entrepreneurs,

scientists, engineers, and technicians, and create an incubator for future success. We cannot afford to scare these folks away.

Today we are discussing new and unique “non-traditional” space activities such as space-to-space remote sensing, commercial space-based radio-frequency location, space resource harvesting, satellite servicing, and commercial habitat services, amongst others. None of these activities were seriously envisioned 50 years ago when the Outer Space Treaty was signed, so it stands to reason that we have no idea what the next 50 years will have in store. Given that truth, we should be doing everything we can to expand the realm of possibility, not narrow it.

Last year, Congress received a report on authorization and supervision that it requested in the Commercial Space Launch Competitiveness Act (CSLCA). Allow me to take a few minutes to discuss the “mission authorization” proposal. The bottom line is that the Administration is asking for an expansion of regulatory authority for the Secretary of Transportation, in coordination with a number of other Federal agencies, to grant authorizations for missions in outer space. I have serious reservations with this proposal.

First, this proposal places the burden of demonstrating consistency with international obligations, foreign policy, and national security with the applicant – leaving the government to decide at its own discretion whether or not an activity should go forward. This is a mistake. Instead, we should have a regime in

which the private sector activities are presumed authorized and only if the government can't address a concern by any other means can it place restrictions on an activity.

Second, the interagency construct, specifically the requirement of “concurrence,” and vague nature of authority granted to the Federal agencies, gives the Executive Branch expansive discretionary regulatory authority – essentially with the ability to regulate any or all aspects of private sector space activities.

Third, regulatory authority is so broad I question whether commercial actors will have adequate notice as to what particular aspects of their proposed activity must obtain authorization. Fourth, and perhaps most importantly, the

Constitution places the responsibility upon Congress to make legislative determinations regarding what requires federal authorization and supervision. It should not be the case that *everything* anyone does in outer space requires federal approval. Article 6 grants States the discretion to decide what must be authorized to assure conformity with treaty obligations and how it is to be supervised. Transferring this authority to the executive branch raises serious concerns given how vast the scope of regulatory oversight would be.

While the report and legislation called for expanded executive branch authority to regulate all manner of space activities, a couple passages of the report have gone relatively unnoticed, and I think they are the most important things to take away from the report. The first is that the Administration found

that the United States is in full compliance with our international obligations, even after space resource rights were codified in U.S. law. Not once in the report did the Administration claim the United States was unable to fulfill its international obligations. The second is that the main argument for expanded regulatory authority was because “unprecedented commercial space activities implicate provisions of the Outer Space Treaty in ways not clearly addressed by existing licensing frameworks.” In principle, addressing outdated and burdensome regulation with common-sense reform is a good idea - - especially if the regulators are inhibiting American innovation and investment. But instead of curtailing and cleaning up the current regulatory construct, the Administration requested a significant expansion of authority - - under the false premise that more regulatory authority will lead to more certainty for the private sector.

I argue that the proposed expansion of regulatory authority will in fact lead to more uncertainty. This is not a claim I make without experience, but based upon oversight the Space Subcommittee has been conducting on the Department of Commerce's Commercial Remote Sensing Regulatory Office. Last year, the Space Subcommittee held a hearing on this subject and received testimony on the challenges associated with that existing regulatory process. Licenses are taking years to adjudicate rather than the 120 days required by law, and applicants are given no reason for the delay.

Given all of these problems with the commercial remote sensing regulatory process, it's shocking that it seems to be the model the Administration chose to adopt with the Section 108

report for regulating space activities. Consider that the “mission authorization” proposal sets up essentially the same interagency process as currently existing for commercial remote sensing, with the caveat that in addition to the Secretary of State and Secretary of Defense having authority to determine license conditions - - you must now include the NASA Administrator, the Director of National Intelligence, and such other appropriate United States Government departments and agencies as the Secretary of Transportation deems appropriate. These agencies, under the force of law, must give their concurrence – an affirmative approval – before any space activities can be undertaken.

While perhaps well intentioned, the previous Administration’s proposal is ill conceived. Instead of creating draconian regulations, we should be developing a proposal that

will streamline the regulatory framework, limit the government's role, promote American innovation and investment, and satisfy our international obligations.

The previous Administration failed to remember that the *Outer Space Treaty* is not self-executing. The executive branch, unless explicitly authorized by Congress, should not deny an American citizen the right to explore and use *Outer Space*. I hope that the incoming Trump Administration will closely examine this topic, because this question of how we will regulate our private sector activities is not simply academic. I believe it is one of the fundamental space policy questions of our time. America is great because it is a country where you have the freedom to create without government permission. We

are all free, unless we chose, through our legislative process, to limit our freedoms.

Other countries, like China, do not share our American value of freedom — but those governments gain some advantage when it comes to directing their economies and directing their public to act at their behest. I for one want to see the future of humanity in outer space governed by the principles of our great nation.

Now let me turn to space traffic management. I recognize that today there is no consensus opinion on what, if anything, Congress and the federal government should do. I also recognize that there are many different ideas being discussed. Frankly, this is a good thing. This is a serious issue, and we should get it

right. In assessing what we should do and why, it's important to recognize where specific stakeholder interests lay and the solutions they propose.

Department of Defense and the Joint Space Operations Center are advocating for responsibilities to be transferred from the DoD to a civilian federal agency. The bottom line is that the DoD doesn't want to use resources on non-military SSA functions. This is a legitimate position. But what is unclear, and still needs to be answered, is to what degree are DoD resources being taxed? The DoD will always maintain SSA capabilities to protect national security. What is uncertain, however, is what level of effort is devoted to a commercial "storefront." Would transferring authority to a civilian agency actually save money? How would this impact international cooperation and space operations security?

The FAA is advocating for taking over existing DoD SSA responsibilities. They are also calling for expanding the number and types of SSA data sources they would process, including commercial sources. The Administration's Section 110 report concludes it is feasible for a civil agency, specifically the Department of Transportation, to take over DoD's function, but we should also explore other options. Are there viable solutions that are superior and do not involve the FAA or another civil agency taking over DoD responsibilities? If Congress decides a civil agency should have a role, instead of the FAA, should NASA or the Department of Commerce be responsible?

It's also important to note that the Section 108 report linked FAA authority to provide SSA information and services to broader FAA authority to regulate on-orbit activities. The FAA

argues that if granted authority to provide SSA information and services, such an authority, coupled with existing statutory authority “to protect public health and safety, safety of property, national security interests, and foreign policy interests,” would be sufficient for the FAA to promulgate regulations governing on-orbit safety of flight operations. The FAA has been publicly advocating for a “crawl, walk, run” approach. In this analogy, the FAA says that “crawling” is providing SSA information and services, “walking” is facilitating standards and best practices, and “running” is regulating only when necessary.

But the FAA’s proposal would give the FAA authority to regulate before it has demonstrated the ability to provide SSA information and services and before the creation of standards and best practices. Should Congress allow FAA to regulate on-orbit safety of flight before it has demonstrated an absolute

public necessity for such regulation? In other words, should Congress let the FAA “run” before it has “crawled?”

As the old saying goes, “when you are a hammer, everything looks like a nail.” When you are a regulatory agency, every problem can be fixed by regulating it. In principle, I am against this type of regulatory expansion. Only if the public interest cannot otherwise be met through other means, should Congress expand regulatory authority and infringements on our liberty.

The private sector, including for-profit entities, not-for-profit entities, associations, and academia, also have a stake in this discussion both as users, and also as providers of SSA and STM information and services.

Several years ago, operators founded the Space Data Association, a private organization that has been very successful in attracting membership and improving safer flight profiles on-orbit. While not a panacea, the Space Data Association demonstrates how the private sector can successfully collaborate and innovate STM solutions without government intervention. They have been so successful that several federal agencies have joined the Space Data Association, including NASA and NOAA.

A number of commercial companies are investing in and operating ground and space-based SSA infrastructure, observing, software and processing capabilities. Information and services are for sale on the open market. Companies are competing to develop more cost-effective, timely, and accurate SSA data, often relying on off-the-shelf and non-military

technologies. In some cases, commercial capabilities and analytics are superior to DoD's. This is good news for America and for the global community.

There are also academic institutions and non-profit entities innovating and contributing to improved SSA information and services. The University of Arizona has been forward leaning with proposals for open-source SSA data solutions, advocating for a hybrid public-private partnership solution to address safety of on-orbit flight operations. We should stoke the embers of private sector creativity, not smother them with a bureaucratic blanket.

As I reflect upon all these different stakeholders, I do see some commonality. First, there is a general consensus that we should enhance the safety of space operations and ensure the

environment is available for future use. Second, there doesn't seem to be any agreement as to what the metrics of success are. To what degree are we to enhance safety and preserve the environment? Without such metrics, we risk chasing after the horizon and crafting policies that aren't appropriately bound. Third, there is recognition that this is an international challenge.

Together, these stakeholder communities have developed a number of potential options. At the highest level, these options are as follows:

- Maintain the status quo and allow the private sector to develop solutions independent of government intervention;
- Transfer DoD SSA responsibility to the FAA and empower the FAA with broader authority to regulate on-orbit safety;

- Facilitate private sector, market-oriented, for-profit STM services;
- Promote public-private partnerships and open-data models;
- Facilitate bottom-up self-regulating standards and guidelines; and
- Advocate for greater international coordination of safety of flight operations.

None of these options are mutually exclusive; however, some options would clearly inhibit other solutions. At this point, everything should be on the table for consideration.

Let us not forget that the U.S. leads the world in promoting safety of flight and preservation of the space environment. In the U.S., space debris mitigation is a regulated activity. FAA, FCC, and NOAA licenses are all required to conform to U.S. space

debris mitigation guidelines. The Federal agencies are also supposed to conform to U.S. space debris mitigation guidelines. Furthermore, U.S. space debris mitigation guidelines are complemented with international debris guidelines - - providing an international coordination mechanism for standards and best practices.

Some have argued that SSA information and services are an inherently governmental function. The private sector provides SSA information and services and has done so for years, therefore it should not be assumed to be inherently governmental. The real question is whether it is an inherently governmental function to ensure that operators have actionable SSA data of appropriate fidelity. This is a public policy question for legislative consideration, not bureaucratic fiat.

Another related question centers on who should bear the costs of SSA and STM. Should the taxpayer subsidize the data and services for space operators? Should operators be responsible, either via fees levied by the government, or through private markets, to cover the costs? The implications of this choice go beyond simply who will pay for a service. It also raises questions of liability and incentives for space operators to improve upon SSA and ensure safer on-orbit flight profiles. If the government provides a service, does it disincentivize responsible behavior by the private sector and create a “moral hazard”? By limiting liability for either the public or private sector, are we incentivizing risk-taking?

Over the past few years, the Space Subcommittee has been hard at work gathering stakeholder input, exploring the issues, and conducting the due diligence necessary to inform any future

legislative action on space traffic management and the regulation of space activities. In the 113th Congress, we held hearings specifically on space traffic management. In the 114th Congress, we passed the *Commercial Space Launch Competitiveness Act*.

The Committee on Science, Space, and Technology will continue oversight this year by evaluating the reports delivered by the Administration, holding hearings, and, as necessary, introducing legislation.

As we assess, and if necessary, move forward with new policies for space regulations and space traffic management, I call upon each and every one of you to uphold the political and economic principles that make our nation so great: Individual Liberty and Freedom. We must do our due diligence and assess

all possible mechanisms of effectuating a desired policy outcome. Outer space and the orbital regimes we all rely upon should be managed appropriately and available for use by future generations. But if we fail to provide a competitive environment for private sector innovation and investment, other nations will happily step up. Outer space is not “airspace” or “territorial waters.” There is no sovereign territory in outer space. If we do adopt a burdensome regulatory structure, commercial space operators, including some of you in this audience, will decide to work with other nations that are more permissive. This will lead to an eroded industrial base, decreased national capabilities, declining international influence, and the loss of a skilled workforce. I, for one, don’t want that to happen on my watch.

I look forward to working with all of you during the 115th Congress. Thank you again for inviting me to speak with you here today.

###