



Promoting Cooperative Solutions for Space Sustainability

Current Issues in National Security Space Policy

Brian Weeden, Ph.D.

Director of Program Planning

Secure World Foundation

Briefing to JHU/APL Space Control Applications Group
April 7, 2021

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Promoting Cooperative Solutions for Space Sustainability

The big questions

- How should the ***US military be organized*** to meet the changing space domain and threat environment?
- What can be done to ***protect current space capabilities and deter attacks***?
- How can the U.S. ***accelerate the development of new capabilities and architectures*** to meet future threats?
- How does the ***globalizing/commercializing space domain*** impact U.S. response to space threats?



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2010 National Space Policy

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NATIONAL SPACE POLICY
of the
UNITED STATES *of* AMERICA

It is the shared interest of all nations to act responsibly in space to help prevent mishaps, misperceptions, and mistrust. The United States considers the sustainability, stability, and free access to, and use of, space vital to its national interests. Space operations should be conducted in ways that emphasize openness and transparency to improve public awareness of the activities of government, and enable others to share in the benefits provided by the use of space.

JUNE 28, 2010



The United States will employ a variety of measures to help assure the use of space for all responsible parties, and, consistent with the inherent right of self-defense, deter others from interference and attack, defend our space systems and contribute to the defense of allied space systems, and, if deterrence fails, defeat efforts to attack them.

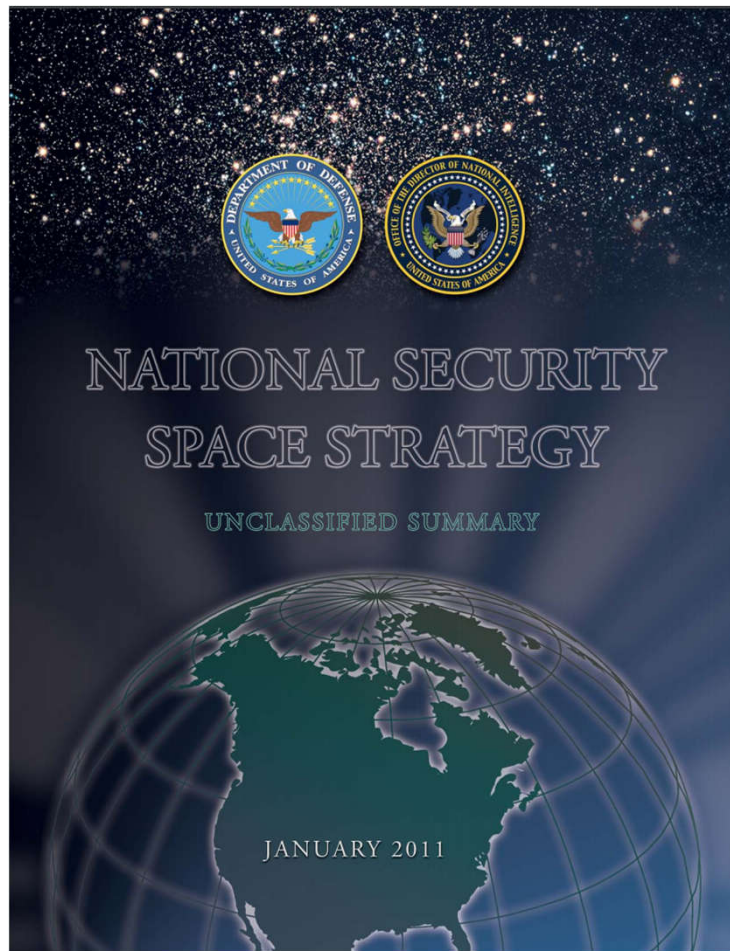
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https://aerospace.org/sites/default/files/policy_archives/National%20Space%20Policy%2028Jun10.pdf



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2011 National Security Space Strategy



- Space is becoming increasingly ***congested, contested, and competitive***

The National Security Space Strategy draws upon all elements of national power and requires active U.S. leadership in space. The United States will pursue a set of interrelated strategic approaches to meet our national security space objectives:

- Promote responsible, peaceful, and safe use of space;
- Provide improved U.S. space capabilities;
- Partner with responsible nations, international organizations, and commercial firms;
- Prevent and deter aggression against space infrastructure that supports U.S. national security; and
- Prepare to defeat attacks and to operate in a degraded environment.

<https://fas.org/man/eprint/resilience.pdf>



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“Fix it” Moment

- At some point in late 2013 or early 2014, a new National Intelligence Estimate (NEI) was done on adversary counterspace programs
 - Likely driven by the recent spate of Russian & Chinese ASAT tests and RPO activities
 - Reportedly it goes all the way to POTUS who says “unacceptable, fix it”
- NSC launches the Strategic Space Portfolio Review (SPR) in summer of 2014, which concludes:
 - must be able to identify a threat in space
 - must ensure that US space capabilities can withstand aggressive counterspace programs
 - must be able to counter the space capabilities of adversaries that target U.S. forces



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Closer engagement with allies

Stratcom, DoD Sign Space Operations Agreement With Allies

SEPT. 23, 2014 | BY [CHERYL PELLERIN](#), DOD NEWS

At a meeting in Ottawa, Canada, officials from DoD, Stratcom, Australia, Canada and the United Kingdom signed the Combined Space Operations, or CSPO, Initiative memorandum of understanding.

The initiative will give participating nations an understanding of the current and future space environment, an awareness of space capability to support global operations and military-to-military relationships to address challenges and ensure the peaceful use of space, DoD officials said.

<https://www.defense.gov/Explore/News/Article/Article/603303/stratcom-dod-sign-space-operations-agreement-with-allies/>



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Space as a warfighting domain

General John Hyten

"AFSPC: Defending our Edge"

AFA - Air & Space Conference and Technology Exposition

16 September 2014

It only gets asked about space because the world does not realize that space is a warfighting domain. It is today. And we have to be resilient to be able to operate through that warfighting domain. And so resilience is made up of a number of things. Disaggregation could be a big piece of that, because right now we have a very small number of satellites on orbit and our adversaries know exactly where they are. If you know

<https://www.af.mil/Portals/1/documents/af%20events/Speeches/AFSPC-DefendingOurEdge-GenHyten-AFA.pdf>



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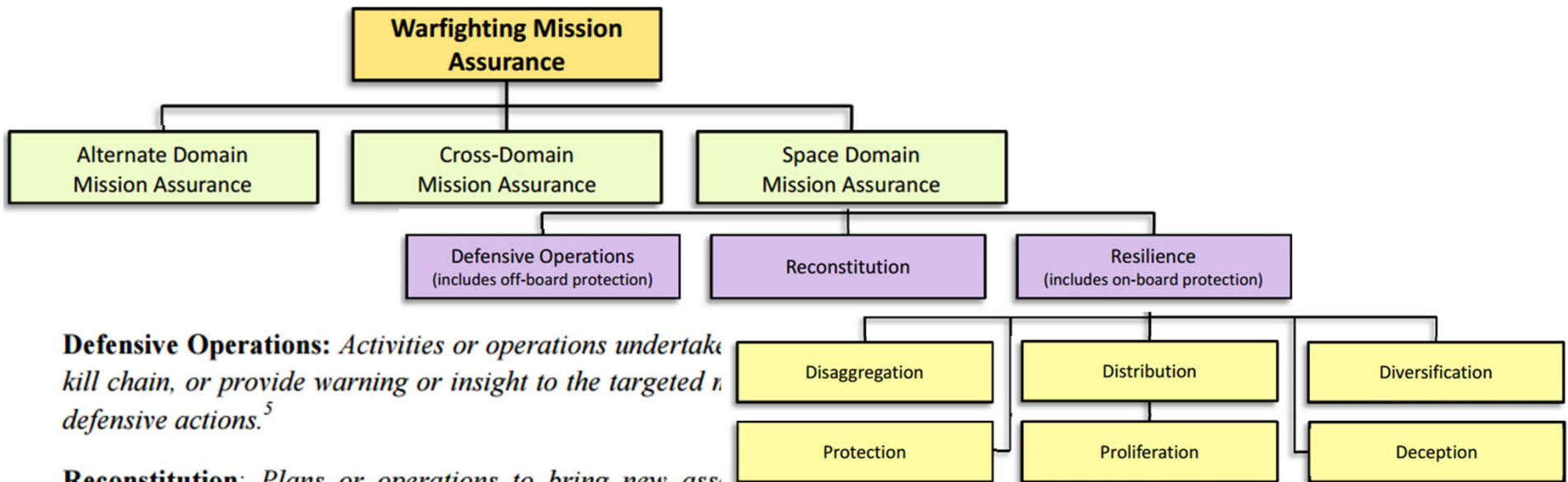
Space war comes to 60 Minutes



<https://www.cbsnews.com/news/rare-look-at-space-command-satellite-defense-60-minutes/>

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Defining space mission assurance



Defensive Operations: *Activities or operations undertaken to disrupt an adversary's kill chain, or provide warning or insight to the targeted to enable defensive actions.*⁵

Reconstitution: *Plans or operations to bring new assets (e.g., replacement satellites or activating new ground stations) in order to replenish lost or diminished functions to an acceptable level for a particular mission, operation, or contingency after an attack or catastrophic event.*⁵

Resilience: *The ability of an architecture to support the functions necessary for mission success with higher probability, shorter periods of reduced capability, and across a wider range of scenarios, conditions, and threats, in spite of hostile action or adverse conditions [...].*⁶

<http://fas.org/man/eprint/resilience.pdf>



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Shift towards a “warfighting” culture

- Stronger integration between military and IC on space
 - Joint Space Doctrine and Tactics Forum (JSDTF)
 - Improve collaboration and coordination on space operations
 - Develop tactics, techniques, and procedures for responding to attacks on space capabilities
- Renewed focus on operating in a contested environment
 - Creation of the Joint Interagency and Combined Space Operations Center (JICSpOC) at Schriever AFB, CO
 - “Experiment” with scenarios

“I hope to never fight a war in space. It’s bad for the world. Kinetic [anti-satellite weaponry] is horrible for the world. But if war does extend into space, we have to have offensive and defensive capabilities to respond with, and Congress has asked us to explore what those capabilities would be.

- General John Hyten



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Enter the PDSA

James named new principal DOD space advisor

By Secretary of the Air Force Public Affairs / Published October 07, 2015



Rogers planning “major reform” for national security space

by Mike Gruss — September 23, 2016



“Recently, the Government Accountability Office released a new assessment on the state of DOD national security space acquisition management.,” Rogers said in the release. “The GAO detailed the 60 different stakeholders who are involved in decision making about space programs. No system can function well when so many actors have the ability to say ‘no’ and no one is truly accountable for doing so. As we see serious foreign space threats increasing and a pattern of significantly delayed and over budget national security space programs, we cannot permit this status quo to continue.”

More organizational “change”

The JICSpOC is dead; Long live the National Space Defense Center

by Phillip Swarts — April 4, 2017



Top military brass and a coterie of civilians during a February 2016 visit to the Joint Interagency Combined Space Operations Center, now renamed the National Space Defense Center. Credit: Air Force/Christopher DeWitt

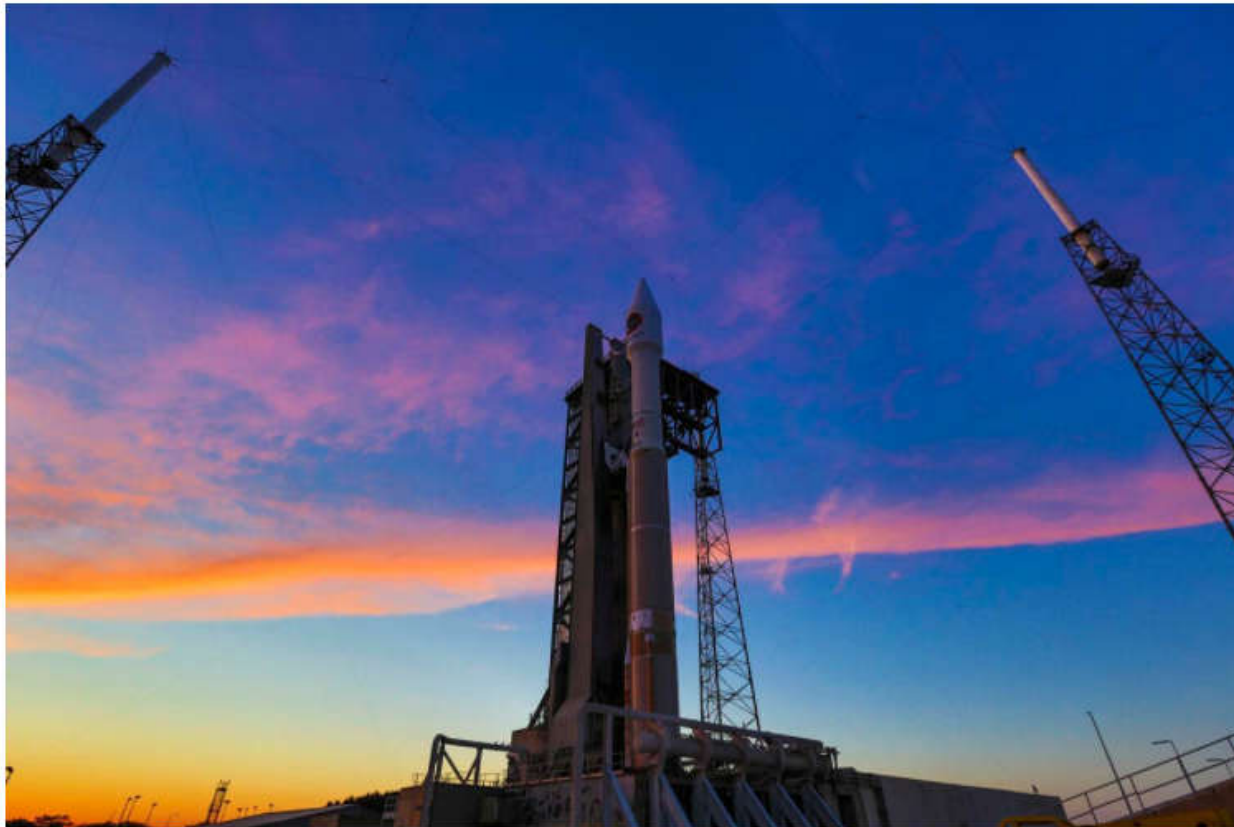


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Space Corps fails to pass Congress

Key lawmaker vows to continue Space Corps fight

By: Valerie Insinna  December 2, 2017



Pentagon's deputy secretary temporarily gets lead space advisory job

By: Valerie Insinna  January 19, 2018



Deputy Defense Secretary will temporarily take over the duties performed by the principal Defense Department space adviser, a position terminated in the fiscal 2018 defense authorization bill. (Courtesy of SpaceX)

WASHINGTON — The deputy defense secretary will step temporarily into the role of the Pentagon's lead coordinator for space activities, according to a memo obtained by Defense News, but questions remain on who will ultimately oversee national security space programs.

Congress in the fiscal 2018 National Defense Authorization Act eliminated the position of principal Defense Department space adviser, or PDSA, and gave Deputy Defense Secretary Patrick Shanahan 30 days to delegate those responsibilities elsewhere.



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New Administration, Similar Policies

President Donald J. Trump is Unveiling an America First National Space Strategy

— INFRASTRUCTURE & TECHNOLOGY

Issued on: March 23, 2018

- Transform to more resilient space architectures: We will accelerate the transformation of our space architecture to enhance resiliency, defenses, and our ability to reconstitute impaired capabilities.
- Strengthen deterrence and warfighting options: We will strengthen U.S. and allied options to deter potential adversaries from extending conflict into space and, if deterrence fails, to counter threats used by adversaries for hostile purposes.
- Improve foundational capabilities, structures, and processes: We will ensure effective space operations through improved situational awareness, intelligence, and acquisition processes.
- Foster conducive domestic and international environments: We will streamline regulatory frameworks, policies, and processes to better leverage and support U.S. commercial industry, and we will pursue bilateral and multilateral engagements to enable human exploration, promote burden sharing and marshal cooperative threat responses.

<https://aerospace.csis.org/wp-content/uploads/2018/09/Trump-National-Space-Strategy.pdf>



NEWS | July 19, 2018

Combined Space Operations Center established at Vandenberg AFB

Shanahan officially establishes the Space Development Agency

by Sandra Erwin — March 13, 2019



Acting Secretary of Defense Patrick Shanahan speaks to reporters after visiting the US southern border on Feb. 23, 2019. Credit: DoD

Trump formally reestablishes U.S. Space Command at White House ceremony

by Sandra Erwin — August 29, 2019



U.S. President Trump formally reestablishes U.S. Space Command during a White House ceremony Aug. 29. Credit: SpaceNews/Sandra Erwin



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...and more

Space Force becomes the newest US military service after Trump signs defense bill

The Space Force is now the nation's newest military service.

By **Luis Martinez**

December 20, 2019, 9:26 PM • 6 min read





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A new Defense Space Strategy

DEFENSE SPACE STRATEGY SUMMARY



JUNE 2020

DESIRED CONDITIONS:

The space domain is secure, stable, and accessible. The use of space by the United States and our allies and partners is underpinned by sustained, comprehensive U.S. military strength. The United States is able to leverage our use of space to generate, project, and employ power across all domains throughout the spectrum of conflict.

The Department will pursue the following prioritized lines of effort (LOEs) to achieve our desired conditions while addressing identified threats, opportunities, and challenges:

- 1) **Build a comprehensive military advantage in space.**
- 2) **Integrate military spacepower into national, joint, and combined operations.**
- 3) **Shape the strategic environment.**
- 4) **Cooperate with allies, partners, industry, and other U.S. Government departments and agencies.**

https://media.defense.gov/2020/Jun/17/2002317391/-1/-1/1/2020_DEFENSE_SPACE_STRATEGY_SUMMARY.PDF



Promoting Cooperative Solutions for Space Sustainability

And a new National Space Policy

Create a safe, stable, secure, and sustainable environment for space activities, in collaboration with industry and international partners, through the development and promotion of responsible behaviors; improved practices for the collection and sharing of information on space objects; protection of critical space systems and supporting infrastructures, with special attention to cybersecurity and supply chains; and measures to mitigate orbital debris.



NATIONAL SPACE POLICY *of the* UNITED STATES OF AMERICA

DECEMBER 9, 2020

Strength and security in space contribute to United States and international security and stability. It is imperative that the United States adapt its national security organizations, policies, strategies, doctrine, security classification frameworks, and capabilities to deter hostilities, demonstrate responsible behaviors, and, if necessary, defeat aggression and protect United States interests in space through:

- Robust space domain awareness of all activities in space with the ability to characterize and attribute potentially threatening behavior;
- Communicating to competitors which space activities the United States considers undesirable or irresponsible, while promoting, demonstrating, and communicating responsible norms of behavior;
- Assured, credible, and demonstrable responses to defend vital national interests in space;
- Resilient space-enabled missions that reduce the impact or deny the effectiveness of adversaries' actions; and
- Synchronized diplomatic, information, military, and economic strategies that:

<https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/12/National-Space-Policy.pdf>



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Thank you. Questions?

bweeden@swfound.org