The Mitchell Institute's 3rd Annual Spacepower Security Forum

March 27, 2024

Opening Keynote: Gen Saltzman

Gen David Deptula: [00:00:00] Welcome, ladies and gentlemen, to Mitchell Institute's third annual Space Power Security Forum. For those of you I haven't had the good pleasure of meeting yet, I'm Dave Deptula, Dean of the Mitchell Institute, for Aerospace Studies. Now, we here at Mitchell Institute are committed to informing the national security debate, educating about the essential roles of air power and space power, and advocating for the policies and resources necessary to improve our nation's defense. Bear with me, if you will, and take a look at the screens. We have a little bit of a background presentation for you.

Mitchell Video: Everyone looks up at the same sky. But not everyone sees what we see. Threats, [00:01:00] challenges, and opportunities all hang in the balance. That's why at the Mitchell Institute, we're devoted to pushing the envelope to ensure America's continued dominance in the air and in space. Our team of experts have created the strategies, flown the aircraft, and operated the space systems that have prevailed in battle.

We never stopped thinking about the issues central to aerospace and national security. From air power, space power, strategy and deterrence to acquisition and budgeting and nuclear modernization. We inform and educate policymakers about the aerospace issues facing America.

We're proud to chart the course to a new vector. When you look up, look up to the Mitchell Institute.

Gen David Deptula: Okay, now everyone in this room knows that space is absolutely integral to modern life and crucial to military operations. [00:02:00] As a result, our adversaries are fielding weapons to deny us the benefits of space.

As the Department of the Air Force focuses on great power competition, the importance of capitalizing on and maintaining our space advantage is greatly

magnified. This is precisely why The Mitchell Institute created its Space Power Advantage Center of Excellence, or MISpace, to inform the American public, Congress, and the Department of Defense about the emerging challenges and opportunities facing the Space Force and our nation.

Now heading up this effort, Mitchell Institute is very proud to have my good friend and partner, General Kevin "Chilly" Chilton, as MI Space's Explorer Chair. And by the way, it's kind of an opportune time because yesterday Explorer 3 was launched in 1958. So, it's very [00:03:00] appropriate timing today.

Now, beyond being an incredible space professional, having served as a former commander of Strategic Command and Air Force Space Command, General Chilton's also one of the people lucky enough, to have visited as well as worked in space as an astronaut, and to do that three times. So General Chilton, it's my pleasure to introduce you to the stage who will be introducing our guest speaker.

Thanks very much.

Gen Kevin "Chili" Chilton: Thank you. Well, good morning, everybody. It's a pleasure for me to kick off the forum this morning and introduce our, our first and I think most important speaker of the day. General Saltzman is a true space power pioneer. As the second Chief of Space Operations he's focused on transitioning the Space Force into a service prepared for the reality of space as a war fighting domain.

As part of this effort, a little over a year ago, General Saltzman [00:04:00] laid out his theory of success called competitive endurance. Aimed at deterring conflict and controlling escalation. Competitive endurance includes three lines of effort, denying first mover advantage, avoiding operational surprise, and responsible space campaigning.

When General Saltzman put out his, this theory of success, he also challenged the Space Force and the broader national security space community to engage in a debate on how to continue refining this theory of success to make US space power as strong as possible. And that's what we're all about at the Mitchell Institute is providing a platform for debate and discussion. And a platform for education.

And so General Saltzman, we here at Mitchell heard your challenge and are excited to host this event today. And without further ado, sir, I want to welcome you to the stage and thank you for kicking off this forum today.[00:05:00]

Gen. B. Chance Saltzman: Thank you, General Chilton. It's a kind introduction. In fact, I think it's the about the third time you've introduced me in the last couple of weeks, which happens to be the same number of times that General Chilton's gone to space. And one of those is, is so much cooler and more distinguished than the other.

But I do appreciate that you went to space also.

Thanks to General Deptula as well. The Mitchell Institute, has been putting on this space superiority security forum. And with this current theme of competitive endurance, uh, it's near and dear to my heart. And so I really appreciate it, all the effort and the opportunity to have this debate and discussion. It's so critical to what we're doing.

Before I get started today, I want to draw your attention to the fact that it is International Whiskey Day [00:06:00] and I, it's a little early in the morning and I don't have anything up here, I don't think, but there is a distillery in North Carolina that is looking to age their bourbon for three years on earth followed by one year in space.

It's true. They're gonna launch the barrel enclosed in a titanium shell and then de orbit it after a year. And you can get a bottle of it for the low, low price of $75, 000 per bottle. And if you've seen the 24 Budget, you know I will not be, or the Space Force will not be purchasing one. Uh, but this is not the first time whiskey's been aged in space.

Ardbeg in 2011 aged a scotch whiskey on the ISS. And while some said it tasted like throat lozenges and rubbery smoke. Others said the taste was out of this world.

All right, , since we rolled out the working theory of success called competitive [00:07:00] endurance, a little over a year ago, I'm amazed at the dialogue, the discourse from the field, from academia, from our partners and allies. And actually the genesis of the topic today, the logic of space superiority stemmed from a conversation I had with Chili at the AFA's Warfighting Symposium back in February, when we were talking about competitive endurance.

And so today I wanted to spend a little bit of time, uh, level setting this forum by introducing the logic of space superiority through our idea of domain control, which falls in line with all the other military services. And then I want to open it up to questions because I really want to hear what's on your mind.

My hope is that the discussion will be a nice tie into the three panels later today centered around each of the tenets of competitive endurance.

So to start, all measurable metrics continue to show dramatic growth in the use of space from 2008 to the end of this year. The projected number of launches worldwide is up almost 400 percent.[00:08:00]

The number of active satellites up more than 700 percent. The number of satellites launched per rockets up a whopping 2, 100 percent. And more concerningly, we see a dramatic rise in man made debris and a corresponding increase in the hazard of on orbit collisions. To punctuate that point, the number of conjunctions to the International Space Station are up over 1, 000 percent in the last four years, resulting in multiple shelter in place warnings for the astronauts.

Now, the increasing use of space is not the only driving of change here either. Two decades ago, threats were localized, temporary, and mostly minor inconveniences. Fast forward to today, and we see an incredibly sophisticated array of threats from the traditional SATCOM and GPS jammers, to more destabilizing direct to anti satellite weapons across almost [00:09:00] every orbital regime, to on orbit grapplers, optical dazzlers, directed energy weapons, and increasingly cyber attacks, both to our ground stations and the satellites themselves.

It has become increasingly apparent over the past decade that the Russians and the PRC are coupling space based ISR, with SATNAV aided, precision guided munitions, that can receive SATCOM updated targeting. Specifically, the PRC has more than 470 ISR satellites, that are feeding a robust sensor shooter kill web, part of the fabled A2AD problem that most of us are familiar with.

This new sensor to shooter kill web creates an unacceptable risk to our forward deployed forces. This is something most of us are just not used to thinking about. Our lived experience in the Middle East was one of indirect mortars, rockets, IEDs, not 2, 000 kilogram [00:10:00] warheads delivered at Mach 5 by more ballistic missiles.

We've gotten a taste of what it looks like from the 2020 Iranian attack on U. S. forces at Al Asad Airfield in Iraq and more recently with the ongoing conflicts in both Gaza and Ukraine. So collectively, this rise in congestion and competition within the domain has led to a growing risk to our continued access to and operations within space.

In the face of this unacceptable risk, the Space Force was established. A military service focused on addressing the challenges and opportunities we face in the space domain. In the military sense, our task of securing the space domain is a reflection of the Space Force's charge. To prepare ourselves to control the space domain, with force if necessary, as part of the joint force while also protecting the security and prosperity our nation derives from space.

And since so many joint force operations [00:11:00] depend on space capabilities and protection from space enabled attacks, our guardians are an integral part of the joint force. Every military service, regardless of domain, must field forces capable of three core operational activities, access to their domain, control of their domain, and exploitation of their domain to ensure the security and sustainability of the domain, not just for the U. S., but all of our allies and partners. A service must be able to control its domain to be able to access and exploit it, and each service must be able to control its respective domain for the joint force to be successful.

The Air Force must gain air superiority, control of the skies to enable friendly aircraft to operate without significant threat from enemy forces. This control allows the U. S. to conduct various operations, including close air support, interdiction, reconnaissance, strategic attack, [00:12:00] with reduced risk to those assets.

The Navy uses sea control to establish dominance over specific areas of the sea, exerting influence and control over maritime activities within the region, allowing us to project power globally, protect maritime trade routes, and ensure freedom of navigation. And finally, for the U. S. Army, land dominance is a fundamental aspect of its mission and doctrine. Emphasizing the capability to conduct ground operations across a wide range of environments and scenarios to allow them to establish and maintain control over territory on land. Enabling the force to dictate the terms of engagement. Deny access to adversaries and project power within a designated area.

And for our service, space superiority is the first core function. It is the ability to contest and when necessary, control the space domain at a time and place of

our choosing. We must protect our space capabilities while also being able to deny an adversary, [00:13:00] the hostile use of its space capabilities.

In the past, we were able to meet our mission just by accessing and exploiting the domain. But now the domain is more contested than ever. Control of the domain is not only an operational imperative, it is the Space Force's reason for being.

Preparing forces to achieve space superiority without the insights of historical combat experience in the space domain requires a system of assumptions, guiding principles, logical conclusions that focus all service activities on a common operational perspective.

This was the starting point of Competitive Endurance, and my reason for being here with you today. The noted military strategist, B. H. Liddel Hart, once said, "The objective in war is a better state of peace, even if only from your own point of view. Hence, it is essential to conduct war with constant regard to the peace you desire."

Now, unlike the other domains, with some [00:14:00] exceptions, when conflict takes place in the space domain, the remnants of that action stay around for a very long time. And that is why our approach to space superiority cannot endanger the safety, security, stability, and long term viability of the space domain.

This was ultimately the genesis of competitive endurance. A theory of success that allows us to balance the need to deny the adversary's use of space while protecting our ability to use it. Only by pursuing space superiority in a disciplined way can the Space Force ensure that the U. S. and our allies and partners have the peace we desire, and more specifically, that we can all access and exploit the space domain.

And I think on the chart, on the screens you'll see, yep, a quad chart that I like to use. In fact, it sparked the debate that, that Chili and I had a couple months ago. I'd like to use this to talk about the logic of space superiority and how competitive endurance and its tenants [00:15:00] help influence that logic.

At its core, it's a visual representation of blue space capabilities against red space capabilities. And the top left is where we have lived for a significant period of time. It's where we want to be, blue space superiority. And of course, it favors U. S. and our allies and partners. The bottom left is a space domain where neither blue or red can use space capabilities.

And I would argue this is a landscape that also favors the PRC in the Western Pacific. In other words, we need our space capabilities to project the power that will be effective. The top right is a space domain where both blue and red can use space capabilities the way they want. And one would also argue that this favors the PRC, again, because of the localities in the Western Pacific.

I'd love to talk more about this in the Q& A section. And finally, the bottom right is where red has space superiority, and of course it favors the PRC. [00:16:00] Anything other than the top left has very high risk to the joint force and our ability to project power. So how do I increase the top left box while maintaining the domain for future usage?

Well, that's the job of the Space Force. And it's where competitive endurance comes into play.

First, we must avoid operational surprise. We cannot, as a country or a service, miscalculate the capabilities, force posture, or intentions of our potential adversaries. We must have timely and relevant indications and warnings to help us avoid operational surprise in crisis and, where appropriate, take defensive actions.

This means we need to have access to and invest in actionable space domain awareness, to prepare our combat forces, reassure allies, strengthen partnerships, and reinforce norms of responsible behavior in space.

Secondly, we must deny first mover advantage. The Space Force must make a [00:17:00] first strike in space impractical and self defeating, thus discouraging potential adversaries from taking such actions.

The Space Force's resiliency efforts are to make preemptive attacks against space capabilities impractical, self defeating. This means our forces must be able to defeat, absorb, and recover from attacks. We will continue to field defensive capabilities that protect space missions from attack, and resilient capabilities that degrade gracefully if attacked.

And finally, we must be prepared to undertake responsible counter space campaigning. We must preserve our advantages without incentivizing rivals to escalate to destructive military activities in space. And should deterrence fail, space forces must be prepared to protect the nation and the joint force from space enabled attack without generating hazardous debris.

Striking this balance will require a wide range of measures to interrupt adversary targeting when necessary. [00:18:00] Our adversaries must never be desperate enough to or emboldened enough to pursue destructive combat operations in space. And these three tenets guide Space Force activities and investments that posture us to protect U.S. interests without compromising the usability of the space domain. And if we can do these three things, then it allows the Joint Force to effectively engage strategic rivals, does not compromise the safety, security, stability, long range sustainability of the domain. This is the logic of space superiority and why it is so critical to the joint force. Because if we do not have space, we lose.

Thirty-one years ago this month, General Chuck Horner testifying before the Senate Armed Services Committee as the commander of Air Force Space Command said, "Tomorrow's national military strategy must fundamentally accept that potential adversaries with the capabilities to do so, will conduct [00:19:00] military hostilities beyond the terrestrial arena and into the limits of space."

And following the end of the Cold War and our victory in Operation Desert Storm, the space domain was ours to control. But as General Horner warned, our potential adversaries have identified space as a critical capability of the joint force and are now challenging control of the domain. Competitive endurance was created to solidify our approach to achieving space superiority.

And we must have space superiority if the joint force is going to be successful in any conflict, in any AOR. My hope is that our conversations, particularly those discussions focused on the individual tenants of competitive endurance, will help us to all think through the challenges we collectively face, what we need to change to address those challenges, and how we need to work together to find the innovative solutions we need to ensure space superiority.

Thanks so much for allowing me to speak this morning on this topic. I'm truly [00:20:00] passionate about it. Maybe not as much as Dave Debtula, but I'm very passionate about this topic. I look forward to your questions, and it's only fitting on International Whiskey Day that this Kentucky boy sign off with Sláinte Vá, which is Scottish and Gaelic for "cheers."

Or as the southern gentleman William Faulkner would say, "civilization begins with distillation." Semper Supra.

Good morning,,sir.

Question 1: Thank you for being here and speaking with us. I think when you talked about General Horner 30 years ago, the Air Force, the Space Force, basically was at least 10 years ahead in many of the capabilities our adversaries, possessed, especially Russia back then. Today it's China.

And China is probably in some areas ahead of us in [00:21:00] terms of capabilities. Part of the problem is we don't know as industry what the Space Force needs. And, and I say that because the recent unfunded priority list came out and there were six items, A through F, that said nothing. They were blank. And so how do we in industry, respond to your needs if we don't know what you need?

Security is a problem. Security is important, but there's got to be a balance.

Gen. B. Chance Saltzman: Well, I couldn't agree more, and the short answer is you can't respond if you don't know the needs. So, that's on us. Second, the unfunded priority list is an addendum. It's an add on. What you really need to know is what's in our budget.

You can see what we're investing in. I think you'll be able to see where we wish we had more dollars, because you'll see the funding profile. So I hope I encourage you certainly to look into the budget itself rather than just focusing on the addendum, but I'm happy to have other kinds of conversations about the addendum.

[00:22:00] Secondly, we, I know I've been saying this for a while, but there is a commercial space strategy that is, almost ready for delivery. I know, I know. And I feel like I've built this up to a crescendo now where you're expecting just everything that could possibly be wanted in this document. But it is coming soon.

OSD is about to release their version of a commercial space strategy. We're going to follow that right behind. I expect to talk about it in detail at the Space Symposium out in Colorado Springs, in a couple of weeks. I think you'll see in there at least categorically where we think in a prioritized way, where commercial industry can provide the best value to us as a Space Force, what our needs are.

And if it doesn't give you some insight to that, then come back and tell me and we'll fix it.

Question 2: General Saltzman, Greg Hadley, Air and Space Forces Magazine. Looking [00:23:00] at the 2025 budget request that was just sent over, uh, Secretary Kendall has said he's worried about the Space Force moving forward, particularly with the budget caps that have been put in place.

How do you balance your need for modernization against the fiscal realities that are currently in place?

Gen. B. Chance Saltzman: You do the best you can, honestly. so first, we get a lot of money from the U. S. taxpayers. I'm committed to getting the most out of every single dollar that we get. I think if you look at the growth of the Space Force from a budget perspective over the last few years, you will see continuous growth.

From 2023 to 2024 it's about 9. 9 percent increase. And so we just gotta, do I need more? Probably. Do I want more? Absolutely. But I think we have to take it all in context and say, you know, the Fiscal Responsibility Act definitely created some constraints that the all of the services had to live within, in support of that act, and we were just caught up in that to some degree as well.

But again, from [00:24:00] 23 to 24, there is an increase and we're going to use it to our, advantage as best we can.

Yes, ma'am.

Question 3: Good morning, sir. Diane Ashley with Deloitte. I'm curious about the status of the integrated mission deltas and how you see those evolving. And I know in the past you've talked about expanding that. Just wanted to get some updates.

Gen. B. Chance Saltzman: Great. I think it's a pretty exciting initiative. It's, we started with two, mostly for beta purposes cause we knew we would learn a lot just by trying to commit at least two of our missionaries, PNT and, and space electronic warfare, to that concept.

For those that aren't tracking, what we did is we, we under a single O-6 command, a Delta, we have put all of the components associated with readiness. And from a military perspective, that means the people, the training requirements, the equipment and the sustainment of that [00:25:00] equipment. Before the reintegrated mission Delta is the equipment and the sustainment of the equipment was split into SSC.

And the people in the training was in SPOC. So you had two three star commands responsible for roughly half of the readiness elements. And it just hurt my military sensibilities from a unity of command perspective. If we give a commander an operational responsibility and readiness is on the list, it always is, then they should have all of the capabilities, resources they need to affect the readiness of their units.

That was not the case with the IMDs, it is the case. We've learned a ton of lessons. I think we're now in active planning for what the next phase is, how we bring on new missions into this construct. So far, so good. And I think you'll see more of this year.

Question 4: All right. So my question is, can you expand a little bit about the Space Futures Command and its [00:26:00] role in the three tenants of competitive endurance?

Gen. B. Chance Saltzman: Yes. I think the easiest way to explain what we're trying to do there is making sure that we have a comprehensive way of looking into the future.

Trying to determine what the future operating environment will look like. So think 10 to 15 years out. What, threats do we expect? What technologies on both sides of the equation, red and blue, do we think will be factor technologies? What missions are we being given by the Department of Defense, allies, partners?

How is it all going to look 10, 15 years from now? Once we assess what that future operating environment is, then we can start to develop the operational concepts. Start to define high level requirements for what the missions will be, how to mitigate the threats. We will be able to prioritize our S& T investments to make sure that their S& T community is pursuing the kinds of technologies that we think will make a difference in the future.

And it also gives us the underpinning assumptions, constraints, and [00:27:00] restraints to allow our planning teams, whether it's manpower, whether it's facilities, whether it's training and range assets, for example, It'll give them all they need to invest properly to support those missions as they come on.

And so in short, it's to say a lot of these activities happen. But in my mind, they were happening in disparate ways, disparate places, not in a coordinated sense and not far enough in advance so that we could really line up all the budgeting,

all the people, all the training, so it all comes together in a capability that we can present to the combatant commanders.

And so now what we'll do is we'll pull these activities together, have a commander at Futures Command responsible for that end to end thinking and planning, and I think you'll see a more coordinated process, a more coordinated aspect for how we want to move forward.

Question 5: General Saltzman, Sandra Irwin, Space News. Given the threats that you talked about, um, [00:28:00] I wonder if you can talk about does the Space Force or do you think that the Space Force has sufficient intelligence or space domain awareness to really understand these threats? And the second part to the question, When you look at the budget, there's a lot of funding in different areas for space domain awareness, for ground space and whatnot.

Can you maybe highlight some specific areas that you think maybe you need more capability than others? Thanks.

Gen. B. Chance Saltzman: Absolutely. Thanks, Sandra. I, you know, to say, has there ever been a military leader that says, hey, I've got all the intelligence I can handle. Just stop Don't flood me with the intelligence. You know, it's just never, it's the unquenchable thirst the demand for intelligence is continuous.

It's ever changing and we're never going to be satisfied that we have enough. So that's a, it's a little bit of a curt answer, but it's just the truth. There's always going to be a desire for more. With that said, [00:29:00] I don't often get surprised by things I hear because the intelligence, our foundational intelligence is pretty good.

At assessing where we think the threats are coming from, what the adversaries are developing, we're usually far enough in advance that, surprising me in terms of a new technology that just arrives on the battlefield or in the battle space, it doesn't usually happen. And so I think we're pretty good with that desire to always have more.

So that's, you know, the intelligence side of things. And the second part of your question was

SDA. Right. Again, it's another one of those things where, how much data do you need to say, I've got all the SDA I can handle? Uh, it's, another unquenchable thirst of mine. So, how many different phenomenologies, how

many different sensors are we bringing to bear on a problem? How continuous is it? Can I monitor a high valued objects in space?

Do I lose it? Can I maintain [00:30:00] custody? This requires a tremendous, network of sensors to continue that data flow. We leverage allies and partners because this is a global aspect. You know, space covers the entire earth. Maneuvers on the South Pole have to be observed if we're gonna accurately determine what the intent of those maneuvers are.

So we have to make sure we have a sensor network. So you'll see investments in putting new sensors, deep space, advanced radar capability that we have and we're developing is in the budget. It's adding to that collection of data to bolster our space domain awareness. But I think there's another important piece and that's, do we have the tools that data together and contextualize it, so decision makers can make timely, relevant operational decisions. And I think that's where we're also trying to invest is to get those, tools together that actually make the most out of the data that we are collecting and we'll be able to take on even more data and make more sense of it faster.[00:31:00]

Question 6: General, uh, great to see you, lecturing again at, again, it's, Group Captain Pete Wilmerdown from the British Embassy, taking the whiskey analogy a little bit further. I would like to say pogue mahon to you, but that might be get court martialed, so I probably won't.

Gen. B. Chance Saltzman: You know what persona non grata means, right?

Question 6: Yeah, I do, sir. Yeah, yeah. Okay. Yeah. So I didn't say that. It's fun. I liked the model of the four boxes. It's very clear. Of course, practical realities, add complexity into that. Uh, and we probably day to day sit further up towards the top right. And the top left, where do you think we sit between those two boxes?

Gen. B. Chance Saltzman: Yeah, the problem is it's a moving target depending on where you feel like you are in the spectrum of conflict. whether it's competition, crisis, or in a full scale conflict. Luckily, we are not in conflict. And so I think we are both sides are using space exactly the way they intend to. So I think we are in the upper right quadrant.

The question is that while that works in competition, is [00:32:00] that going to be an effective place to be if we move into crisis or conflict? That's where I see the problem. So it's, there's a time scale on this as well. It's not just about what

is our current position and can we maintain it? It's about where do we want to be on those quadrants when we go into crisis and conflict.

And if we're able to be in the upper left, I think you can make a case that you actually might be able to deter. If you could convince somebody that you could put yourself in the upper left quadrant, it has a deterrent effect and you don't have to go beyond crisis. You can drive it back into a more stable state of competition.

By the way, that's why we call this competitive endurance. It's do we have the ability to keep the conditions of the international order in a state of competition. As being preferable to crisis or conflict.

Question 7: Hey, sir. It's a Major Ben Statz. I'm at U.S. Space Command. And so I think tied to the other question, what I really wanted to get your kind of [00:33:00] insight on is one of the critical assumptions, which is, you know, going back to your chart, if it benefits PRC. You know, they've built up, a wide range of kinetic, counter space capabilities over the last several decades, obviously to counter, our advantages in space.

And so the assumption kind of baked in there was, well, if it benefits, as you suggested on the chart, it's still benefits, PRC where we're in a, both in a denied environment. You know, how do you kind of continue to make that assumption, that PRC is willing to make is, you know, whether they're rational or irrational actor, for example.

How do you kind of look at that? Tied to what you're, mentioning just now about competitive endurance, how do you kind of deal with that assumption, that PRC might make the, you know, look at the threshold of risk, differently than how we do.

Gen. B. Chance Saltzman: Uh, absolutely. And I think what's happening over time is it's starting to play more and more into our hands.

The more time we have, the more resilient we're going to be. And by resiliency, I [00:34:00] mean, we are not going to be able, we are not going to conduct missile warning, for example, with five or six exquisite satellites just hanging over a spot at GEO. We are going to do it from a proliferated constellation. So the level of violence, state violence, that it would take to deny us the missile warning mission would be orders of magnitude above what it is currently.

That, I think, has a level of deterrence. Because over time, the PRC is becoming more and more dependent on their own space capabilities. So if you have to go to a level of violence to achieve a single mission effect. But you create a debris, a hazardous debris field that actually jeopardizes your own kill web.

It starts to change the calculus. And so I think time has an effect here, uh, that we have to pay attention to. But that's the idea is changing the calculus for what it would mean to launch a first strike. That's the idea.

Question 8: Joe, Frankie, from IntelSat, sir. [00:35:00] Circling back to the, your response to the group captain regarding not being in conflict. I was hoping you could expand on that a bit. Just because from, you know, now outside looking in, it looks like the space domain is in a constant, whether it's passive aggressive or outwardly, it seems like it's always in a state of conflict.

Gen. B. Chance Saltzman: Um, yeah, Joe, I'm just taking this purely on, hardcore definitions. Not are we fighting, not how, how aggressive is the contesting of space, but we are not at war with any of those countries. That's conflict. We are also not in a state of crisis that looks like if we don't take active action, it could lead to a conflict.

We are in competition. There are things that are going on. They are probing, they are exploring, they are pressing our buttons. That's what great powers do in competition. And we have a long history of, of seeing how that plays out. We just have to recognize that our, our goal in that state of [00:36:00] competition is to maintain stability, push where we can push, receive where we can receive, and just manage the competition itself.

Because going into crisis and going to full scale conflict is what you won't have to guess whether we're in conflict with the PRC, it'll be very obvious. And we got to stay out of that environment.

Question 9: Hi, General. Thanks so much for doing this. Pete Shin, National Guard Enthusiast. I'm wondering, what is the plan, I'm sure you have one, if indeed Congress forces your hand in creation of a space guard, but what also is your plan, to spin off those current Air National Guard assets that provides space functionality, faith and space mission capability to you.

Gen. B. Chance Saltzman: Yeah, you know, the foundational piece that I always start from is the capabilities that are currently resident in the Air National Guard [00:37:00] are vital to us. It's, it's capacity, it's expertise, uh, that we need.

And so regardless of which way this goes, my primary concern is making sure we hang on to those units. Those resources, and especially the expertise that currently lives in the Guard to the max extent possible. And, and I'll tell you that's, I have many conversations with Dan Hokinson over and over and over again, and that is both of our central concern.

And then the question becomes, well, what's the optimal way to do it? And then really it gets into more administrative issues. Can the Space Force afford two components, and all the structure and overhead that would come with managing two components? Uh, and can a Space National Guard manage a very small force, and have the retention, the upward mobility, the things that make, a force viable, for its personnel?

There's, there's good and bad on all this and we're weighing it heavily. The Secretary of the Air Force will submit a report to Congress later this spring, on the kind of the pros and cons, and then we'll see how Congress [00:38:00] decides to organize it.

Good morning,

Question 10: sir. Mike Sinise, retired Air Force, AFA, Gabriel Chapter. We talked a lot about the threats to the space. segment. I wonder if you could elaborate on this. The other part that's just as important. It's the ground segment that controls all those things and how the those are, threats by, sabotage terrorists and also especially the cyber threat that opposes to those systems. Thank you, sir.

Gen. B. Chance Saltzman: No, I appreciate it. We're actively cleaning up our vocabulary because we've, you know, when we were under the Air Force, we kind of over aggregated our mission sets to some degree because we needed, to advocate properly inside the broader Department of Defense. Now we're starting to talk about it in more precise terms.

So when I say space operations, I'm really talking about three elements. It's [00:39:00] the on orbit element, it's the ground element, and it's the link structure element that, that has to be protected as well in the, in the electromagnetic spectrum. So we recognize that all three of those can be capabilities and vulnerabilities that have to be exploited and protected in order to get the broader space operations mission complete.

And so we're, we're doing our best to account for that.

Question 11: Hello, Mike Barnes from Leo Labs. I was at a, briefing, not long ago where Colonel Davis was talking about the, problem of only having Guardians for a very short period of time. How much of that time is involved in clearing them? How much of the time is involved in training them? And then how little time they had on site and a very slight comment that, uh, there might be a need to have commercial augmentation to the guardians where you might have a civilian contracted force. Is there any thing you'd like to say about that? [00:40:00]

Gen. B. Chance Saltzman: Well, I can tell you that, when you're a small force as we are, you know, we're approaching 9500 in the next couple of years, we'll probably get close to 10, 000 active duty members.

That's tiny by Department of Defense standards. That means we have to be very careful and very specific with how we use, manage, attract, assess and retain our workforce. And so we are going to great lengths to make sure that we are actively looking at each of those elements to make sure we optimize it.

Where do we need people to stay longer? And if it doesn't make sense for a military member to stay longer, how do you augment that with either a civilian workforce or commercial augmentation. And we are looking at what the right mix is for that, across the force. When I mentioned the Futures Command looking at the, what we would call all of the dot mil PF considerations, doctrine, organization, training, manpower, all of those considerations.

We get to [00:41:00] manpower and we don't necessarily have Space Force derived models for how to use our manpower. We're leveraging it off what we either learned from the air force when we, when we were pulled out. Or across the department, uh, policies and guidance that the Secretary's put in place. So now we're starting to think about it more individually as a service.

Build our own models, our own tools to be able to do that planning more effectively. But it will consider active force, civilians, as well as contractor commercial augmentation.

Question 12: Hello, sir. Thank you for being here. My name is Camille Lance with Rhea Space Activity. Firstly, it was great to see Col. Galbraith's work on Cislunar Space on all of these tables. I understand if you had another dollar, you would not spend it on Cislunar Space, but understanding that it's a source of operational surprise and a location that we're behind in for domain control, do you foresee looking into how to efficiently leverage Cislunar Space?

Gen. B. Chance Saltzman: Certainly from a conceptual standpoint, [00:42:00] absolutely. From an intelligence standpoint, we're watching very closely what's going on. We're working closely with NASA to make sure we understand what they're doing and what they're learning. And so we're not ignoring it, I promise. There's several different lines of effort to make sure that we understand where specifically the military aspect stands with regards to the Cislunar concepts and the work that's being done out there. It's just, I've got some really near, closer, near to the earth problems that I have to solve, before we start thinking about large scale investment, beyond that. Just about priorities, near term priorities.

Question 13: Courtney Alban with C4ISRNET. Um, the Space Force, recently demonstrated, the Victus NOX mission and Tactically Responsive Space is planning some more demonstrations and looking to operationalize that in the next couple of years. As you look at the industrial base to support that, [00:43:00] where do you see the strengths and weaknesses in the industrial base to get to that operational capability and what is the Space Force doing to continue to invest in that?

Gen. B. Chance Saltzman: Yeah, the interesting thing that I learned watching that, and that was a tremendous success, by the way, I thought, on all accounts, is what we learned about our processes might have been the most valuable thing. Not just can the hardware perform, can the links work, do we have the training to be able to bring things to operational viability quickly?

I think I was counting on that. What I was worried about is procedurally, process wise, do we know how to take a spacecraft out of a warehouse and get it on orbit fast? And how do you integrate? How do you move it? What are the contractual mechanisms that have to be implemented quickly to pull it off?

And when you shrink all of that down from warehouse to operating on orbit in 96 hours, more or less, you've got to be really tight on all those processes because you can lose weeks [00:44:00] quickly executing a more deliberate set of processes. And so that, you know, whether it's a standing capability that we say, look, there's TAC RS, that's really not where we are in the learning, um, environment right now.

Where we are is, do we have the processes in place to be able to respond and react rapidly by putting something on orbit quickly? And I think we started down that path to learn those lessons.

Question 14: Hello, sir. My name is Matthew, friend from London. Uh, so when we have a look at what the Chinese are doing, so I work globally. The

Chinese are pulling ahead in a whole variety of different spaces, whether it's quantum, artificial intelligence, 6G, hypersonics, and all that sort of stuff. When we the space domain, really, if we have a look at the two extremes, on the one hand, we've got the ability for, say, adversaries to destroy space assets, which will create a huge amount of junk, and will actually be counterintuitive, because it will [00:45:00] eventually disrupt their own space operations.

When we have a look at things like spoofing, when we have a look at things like jamming, and general interference. That's where I think most of our adversaries will actually go. However, when we actually have a look at cyber, you know, we have Iran, we've got North Korea, we obviously have Russia, China heavily aligning.

What are your plans to prevent signals interference? Because if I was an adversary, one of the best ways to disrupt the U. S. military, in my mind, would be just to make your satellites feed you the wrong information. So you end up with the wrong battlespace intel, and that way I maintain my space assets as an adversary, but I've now mucked up your battlefield.

So what are those projects? So we see a lot of artificial intelligences, for example, now being used to manipulate data and signals and everything else, and that's going to eventually end up in the satellite space.

Gen. B. Chance Saltzman: Yeah, when you hear the Space Force talk about its cyber defense missions, that's precisely what we're talking about.[00:46:00]

How do we assure that our networks will be available, that the data is assured and secure, that when we say cyber defense, it's our mission systems and that ground element, the link structures protecting all of that. That's what we're focused on with our cyber contingent. We don't currently offer cyber forces to U. S. Cyber Command, because our cyber people are focused on that particular aspect of it. So that's an emphasis item. The other thing that sometimes gets lost in just maybe wordsmithing, but the word resiliency is very specific to what we're trying to do from a strategy standpoint. It's different from redundancy, right?

Redundancy gives you some assurability, but you can overcome redundancy with just additional capacity. You're just taking out more things, networks, lines, et cetera. Resiliency is an ability to recover of your existing system. And in the cyber domain, it's entirely different. We understand we're going to be under attack.

How fast or how insignificant can we make that [00:47:00] attack? That's the essence of cyber resiliency. And that's what we're focusing on.

Question 15: General, we're sitting here kind of at an inflection point with Starship that have five plus launches between now and next year. How are you kind of incorporating the potential significant cost of mass, you know, per kilogram, not just, you know, maybe in the near term, but long term in terms of planning ahead for future budgets?

Are you incorporating that into forecasts? For context, most startups, we're hoping on that. And so we're looking forward to, you know, that sort of decline. And that might be some sort of way to liberate some of the eternity of budget right now.

Gen. B. Chance Saltzman: Yeah, I think the work that, that SpaceX is doing with the Starship is, is groundbreaking.

And not, maybe not groundbreaking in the sense that we've had big rockets before that have put heavy payloads on. But now you're talking about a commercially viable product, which could change the cost per associate. So that's, it's an amazing set of innovations. But it really in a broader sense, I think when I talk to industry, one of the things I try to encourage is, we expect, I want to be [00:48:00] along for the learning.

I want to be involved to watch what's happening, because if I were trying to define it would fall so short of what I'm capable as an industry and startups of doing. I would never have written requirements for Starship. Right? I mean that's crazy. I just, it's not, my mental model doesn't, wouldn't, frame around that kind of capacity at that price point at that scale.

We couldn't do it. So what we're relying on is industry, to help us innovate by showing us the art of the possible. Bringing ideas to us saying, is this useful? Here's some ideas that we think could be useful based on what we're doing. And here's the price points and get us excited about it. If we stand back and wait for the Space Force to go, "okay, I got my eye on all these technologies, and now I'm going to start writing some requirements documents and floating some RFPs."

It's going to, I'm going to get it wrong, because I just won't have the insights and the creativity that I currently see out in the commercial space industry. So I'm trying to kind of flip that a little bit.

Question 16: Sir, good morning. George Nicholson. Good to [00:49:00] see you again, sir. Thank you. The Washington Liaison for the Global Special Operations Forces Foundation.

A question we've had historically is the balance between strategic support from space command and tactical. How's that being resolved? And the other question is, if you look at capabilities out there right now, you've gone ahead and established a dedicated capability in the INDOPACOM region and other regions.

In terms of what's being done down at SOCOM, I think you've been down and talked to General Fenton down at SOCOM. I look at the problems we've had in the past, and I've had conversations with General Raymond, the problems we had on the Iranian hostage rescue mission, which I was involved with, the problems we had on Songte, which I was involved with, and Grenada, which I was involved with.

Basically, the conversations you've had with SOCOM is looking at basically more at educating them to what you can do from space and you don't need to do with legacy assets.

Gen. B. Chance Saltzman: Yeah, thank you, George. Thanks for your service, as well. I think I [00:50:00] would start by saying that the, in the past, in relatively recent historical past, my career, certainly, Uh, the bright line between strategic space and tactical space, there was a clear division. Whether it was on who the customers were for the data. Whether it was how the data was was given out. How it was protected. What classification levels it was held.

You could see a pretty bright dividing line between strategic space and tactical space. That has blurred to the point that's actually starting to cause consternation because we've got to figure out what are the new roles and responsibilities. The data can be made available and how it's used in one minute is strategic and one minute is operational and the next is tactical or all simultaneously across multiple theaters.

We've just reached that point with how space capabilities are being used. So we've got to break the mental models, I think, on strategic tactical, with regards to space. So that's one thought. Second is I had many great conversations with General Fenton and special [00:51:00] operations is such an interesting place for space to be involved with.

One, we don't build traditional space operation or special operations forces. So presenting them to special operations, that model doesn't necessarily work for us. But he comes up with these great ideas. Well, what if this was true? How, what if we use forces like this? How, could we be a part of this from an asymmetric, if you think about it as an asymmetric force, how could space be integrated to help?

I'm overwhelmed when I'm hearing him talk. I'm like, I have no idea. I like, I trust you. Right. That's kind of the take I have on it. But here's what I'll say is I want to commit to establishing service components to all of the combatant commands, because I think that's the most flexible means by which I can continue to have those dialogues every single day.

And that service component commander is there to understand what the priorities of the command are, what the ops tempo of the command are, what their challenges are, what the opportunities are. And having somebody embedded in those commands, a team embedded in those [00:52:00] commands, then allows the service to support better.

So I'm trying to create this flexible organizational structure. Because I don't have the easy answers now, but I want to be able to support all the answers that come up over the pending years.

We're out of time.

Gen Kevin "Chili" Chilton: I'm going to repeat myself. We're lucky to have this man in charge of the Space Force. Sir, you've given us a lot to talk about today. I really appreciate your comments. So thanks so much for joining us.

Gen. B. Chance Saltzman: Thank you. Appreciate it. Thank you all.

Gen Kevin "Chili" Chilton: Okay. I think our next event, well I know our next event starts at 10: 10, it'll be our first panel. If you need a quick break, please be back in your seats by 10 after the hour. Thank you very much.