

Panel 3 - Responsible Counterspace Campaigning - Transcript

Charles Galbreath: [00:00:00] What we are talking about here in this panel is responsible counter space campaigning. And you've heard that, I think, mentioned in each of the panels, as well as with all of the keynote speeches and comments today, how, oh, I'll save that for a later discussion. Well, this is that later discussion, and I'm pleased. Uh, to have this distinguished panel, uh, with us here to discuss it.

So good afternoon, ladies and gentlemen. I'm Charles Galbreath, uh, one of the senior resident fellows at the Space Power Advantage Center of Excellence at the Mitchell Institute. And space control, space superiority, counter space, whatever you want to call it, it's a topic near and dear to my heart, uh, which is why I'm so pleased to have this incredible panel with me.

Um, leading me off here is, uh, I'd like to welcome Dr. Kelly Hammett, who is the director and PEO for the Space Rapid Capabilities Office. I'd also like to welcome Brigadier General Devin Pepper, the Vice Commander of Space Operations Command, and the [00:01:00] Deputy Commanding General of Operations. We're also very happy to have, Robert "Otis" Winkler from Kratos.

He's a long time friend and fellow, uh, of the Mitchell Institute as well, and someone who has a tremendous background on this subject given his time on the Hill. It's also my pleasure to welcome Mike Neylon, the Director of Space Protection and Control at Raytheon.

Uh, they're doing incredible work in this area, and I hope we can hear about some of that today, even though we may also... no, we're, okay, he's just gonna shake his head and take the oath of silence.

Um, and finally, on the far end there, I'm excited to welcome John "Patsy" Klien, the author of the Fight for the Final Frontier, Irregular Warfare in Space. I'm so pleased that you could join us here. He is also a professor at George Washington University and Georgetown focusing on spacepower.

So with that, we've kicked off each of our panels with the discussion of the Russian ASAT. So this is no different. We've talked about the need for responsible counter space campaigning.

It's called for a ban on debris generating testing and yet the news of a [00:02:00] Russian ASAT created renewed concern about the potential adversaries steps that they might take to achieve their objectives. Uh, so does the development of a, of a new Russian ASAT, uh, give us reason to rethink what we must do to present a strong deterrent posture to our potential adversaries? General Pepper, I'd like to start with you.

Brig Gen Devin Pepper: Sure. Okay. Well, I assume it's on and everyone can hear me. Uh, I, so, the, I would say yes. In regard, to the, you know, something we talked about before about over classification of space. So in order to deter a potential adversary, you have a capability to put their, uh, capability at risk.

So I think, uh, you know, the PRC and Russia has been very good at messaging to us as far as their capability and things we have. Certainly, I think when it comes to space and everyone knows this. I mean, I've been on several working groups [00:03:00] where everything is so highly classified that we can't talk about the capabilities we have and those capabilities could potentially be a deterrent.

So I think, uh, anyone here from OSD? OSDP folks. So I know Dr. Plumb...

Charles Galbreath: Just left.

Brig Gen Devin Pepper: Yeah, he was just here. I don't know if anyone stayed behind, but I know there's an effort right now to declassify a lot of our counter space capability. Um, and that will be a significant, significant, uh, allow us to communicate exactly, uh, some of the things that we have or, you know, or in development.

So with that, again, I think Russia and China have been actively communicating to us the capability that they have to put our space to the space domain at risk. We have to be able to do the same.

Charles Galbreath: Dr. Hammett, do you want to chime on that one too?

Dr. Kelly Hammett: Sure. I have, uh, several things to add, but first, uh, thanks to the Mitchell Institute for inviting us here and having this panel the last and best panel of the day, as I'm sure you all agree when, when we're done.

I would [00:04:00] say the answer to the specific question is no and yes. So if you put all the, all the panels together, right? We say we have to be continuously threat informed. And we are. We have General Gagnon, our S2,

and we have an NSIC, and we have, uh, a whole, uh, apparatus, and it came up earlier today about national intelligence versus operational intelligence, and we need to have both, and we do, right? So, we are tracking those things, and just because one new threat, uh, popped on the radar, does that change our strategy? Not necessarily. We're watching the threat all the time, we, we have a slate of capabilities in the development pipeline, uh, to address those threats. As, uh, Dr. Plumb very, cogently, danced around given the environment we're in. But so we're watching the threat, we're responding to the threat.

A single new threat may pose, you know, some new response option. But we're, that is within our strategic framework. Now with respect to what General Pepper said, I was gonna elaborate on this because Dr. [00:05:00] Plumb, DepSECDEF, hit a home run with revising the policy and issuing some authoritative guidance, which is now out to the field to execute.

And he alluded to this. So, I'm one of the organizations that will get to spend the next 18 months walking through our portfolio and, uh, making determinations of what comes out of those highly classified channels. So, that we can integrate with the operators, so that we can communicate with allies and partners, so that we can communicate those demand signals better to industry.

So, they've laid the foundation for us, and from that perspective, I definitely agree. You know, we need to rethink how we're doing this. To me, that's a little bit more of a tactical thing. Until you get into the conversation that General Chilton was trying to have with Dr. Plumb about reveal, conceal, deter.

And General, uh, Dr. Plumb and I have gone round and round about this. I come down a little bit more on your side about, you know, there is no deterrence if you don't reveal something, and I think that's where, uh, General Chilton was trying to go. And, and [00:06:00] Dr. Plumb has taken the position largely of strategic ambiguity. So I think we still have to work through those discrepancies as we walk through this process, but that will happen.

The review process will go up through the services, as he said, and then up through OSD. Um, as we make these declassification or downgrade decisions. So we, we have a framework and we have the guidance we need to make those changes.

Charles Galbreath: Patsy, anything to add to that from a, from your perspective?

Dr. John "Patsy" Klein: Sure. I want to just say, uh, thanks to Mitchell for having me.

I was told I couldn't say it depends is the answer.

Charles Galbreath: I'll take away your pie.

Dr. John "Patsy" Klein: Okay. But, uh, you know, being a part time academic, I get to teach classes on Monday night. So I'm going to take it as a personal challenge to keep everyone awake and engaged as we do this. But to answer your question, it's, it's a bad news, good news story, and the bad news first.

We do mirror image. Uh, we cannot seem to get over it. Despite the problems with it, the United States, Western liberal [00:07:00] democracies have a fundamentally different view on deterrence, what it takes to affect the decision calculus than Russia and also China. China and Russia are totally different, uh, deterrence frameworks.

But to your question about Russia, uh, for the folks who were around during the Cold War. We understand that Russia, the former Soviet Union, now Russia's military doctrine the use of nuclear weapons was considered different. There were considerations of tactical nuclear weapons. This goes back to Soviet Union could not compete with NATO's supremacy.

So it would use tactical nuclear weapons in the Folga Gap. Where am I going with this? In the West, we like to think of the win-win. If it's good for me, it's good for you. Why isn't that the obvious solution? But if you read Russia literature, some of the historical experience, they also include the win-lose and then also the lose-lose.

So, "I am okay losing if you lose [00:08:00] more." So back to mirror imaging, whenever the press conferences were made about what Russia would or would not do, there was a lot of mirror imaging there based on our Western assumptions, like it would impact us badly. To the good news, you know, I talked about deterrence by punishment there.

There's also deterrence by denial of benefit. The good news is the space community knows deterrence by denial of benefit as space mission assurance and resilience. We know if we can convey the futility of aggression in space, would be aggressors can be dissuaded. And the other side of it is, should

conflict happen, deterrence by denial of benefit acts as a hedging strategy so we can fight through.

Charles Galbreath: Thank you. Now, Mike, I noticed from an industry perspective, what does this mean to the type of capabilities that your companies are working to develop? Uh, I mean, you're both working on space systems and ground systems. So I'd really like to understand how the threat environment and [00:09:00] responsible counter space campaigning is impacting your decisions for capabilities.

Mike Nelyon: Uh, sure. Uh, in a couple of dimensions. The first is most obvious is resilience, but, and we've hit that note many a time, particularly in the space domain. However, on the ground side, that can mean a couple of things. Uh, one is virtualization, right? I can be able to log in anywhere in order to have the effect and deliver the sensing that I need or at least control those assets.

Uh, the other is consolidation, which is slightly counterintuitive, but it does bring the Guardians out of harm's way in some cases. So having a centralized location and having centralized control for distributed assets is still a viable path forward.

Additionally, there's a few other points here. One is data, right? We've hit a couple of times in terms with respect to SSA, et cetera, but getting into the doctrine of SDA. Data is good in actionable information is what actionable information is what is needed. Uh, and that's difficult. Flooding the system with additional data is fine, but if we don't massage it into a way that a guardian can take action, it is [00:10:00] essentially irrelevant.

Uh, and some of the ways we've been trying to adapt to that, uh, is including frameworks. One of the things we've adapted in our space protection IRAD is our space threat and assessment tool. A modular framework to insert other applications to do analytics. To say, "hey, you know, operator XYZ, this is what's going on..." contextually accurate, uh, to give that actionable information going forward.

And the last bit would be automation. We've hit that note a few times today. Certainly, in the long game of AI, there's no, no doubt that's a tidal wave that's coming. However, a lot of feedback we get from operators, site commanders, et cetera, is "I also need to know what... I need to make a decision. You can't get me out of the loop. I at least have to be on the loop." So creating a tunable automation is to present that the actionable information, actionable COAs, uh,

to go take action., versus just, uh, completely automate end to end. So those are the approaches we're going through.

Robert "Ottis" Winkler: Yeah, so I'll agree.

I think that, you know, resiliency in ground or resiliency on orbit [00:11:00] is super important. But when you look at deterrence, right, we talk about in deterrence, we talk about capability and credibility, and we can't, in deterrence theory, just rely on having more targets. We're hardening, armoring up the targets that we have up on orbit, right?

We have to give it additional capability, and that goes to the credibility aspects of it. And as we've heard up here, right, it matters a lot with what we're able to say. And it matters a lot with what the enemy believes. And if we just sit back and assume that they won't use weapons, debris, weapons in space, even though that they've demonstrated that, and we assume that we somehow will maintain or gain space superiority by not having an offensive capability that can deny the enemy their assets on orbit.

I think we're fooling ourselves. It's war fighting in space. We need to act like it's a war in space.

Charles Galbreath: Sticking with the industry perspective here. One of the things we heard mentioned earlier, I believe it was Derek Tournear talked about [00:12:00] supply chain is a key risk. So from an industry perspective, the logistics part of sustaining and campaigning in space where, you know, there will be attrition and we need to consistently deliver capabilities over time.

What are your concerns with the reconstitution or the replenishment of capabilities over a longer extended period of time?

Robert "Ottis" Winkler: So I'll start. I think, uh, so I think that, uh, we've heard earlier today in the other panels that reconstitution is important. The Space Force did a fantastic job of going from starch to operating on orbit in 96 hours.

And so we, they've proven out that it's not a technical problem to be able to put things on orbit quickly. Whether it's to give additional capabilities in competition or it's to replenish in conflict. Should that become a factor. I do think that, uh, we have a problem with supply chain and the fact that they think that SDA and Dr. [00:13:00] Tournear have exhausted our bus manufacturing capability. Uh, and so we have to, in the same way that we're doing efforts for

the 155 and for solid rocket motors throughout the rest of the defense industrial base. We need to be able to do that for space as well. But I think a part that's missing in this is, is the ground infrastructure.

The way that, that space systems are built is they're built with the idea of on orbit first and then they have a normally a stovepipe ground system. And, and if you start putting up capability that isn't, that is, you know, outside of the normal programs of record, you have to have a resilient open ground system that can be able to do TTNC as well as data transfer down.

And that part, I think, is the part that is missing that industry, I think, can help with.

Mike Nelyon: I agree. I'll take a slightly different approach. With respect to resilience, reconstitution, one of the things that's been very successful in our area is the concept of MVP, minimum [00:14:00] viable product. Uh, and why I really enjoy that, in both successful for, as a company and successful as a mission.

Uh, developer and deployer. It allows us to go faster and focus on what's really truly important. And in the sense of reconstituting, it drives a simpler system that can get to the warfighter faster. And it is becoming a core tenant of how we operate. And now repeated, with additional contracts.

And so it's a, it's a path I really hope the rest of industry embraces.

Charles Galbreath: Great, thank you. For all of you, we've talked about the integration of commercial capabilities and certainly in Ukraine, for example, we've seen how commercial space capabilities are playing a critical role in the defense of Ukraine against Russian aggression.

Does the inclusion of commercial capabilities and we've also talked today about we're not going to sign contracts with companies that we don't think are going to be there in the long term. They all, they all are. On board. But is there some aspect of a new [00:15:00] requirement that comes from such a high level of inclusion of commercial capabilities when it comes to responsible counter space campaigning? For maybe the defense of those capabilities or potentially their offensive capability.

Brig Gen Devin Pepper: Yeah. So I think that the Chief may have mentioned this a little bit earlier today, but certainly I think again when it comes to CASR, CASR is going to be a game changer for us. So we have, we have to have those

contracts in place. Early on, to be able to replenish any of our loss capability. We have to provide mission through any conflict.

Now whether or not that provides us with defensive or offense capability, that's to be determined. But certainly there's a requirement that we're going to have to leverage on all the capabilities that we will need to replenish, right? So certainly, uh, and we have to do that ahead of time.

I think that's why the effort to develop a CASR framework is going to be critical. So that way we can pull the trigger, if we need to. And we'll have those [00:16:00] capabilities that can go on orbit, whether it's offense or defense. Uh, I'll just leave it at that.

Charles Galbreath: Ottis, since you've got the mic.

Robert "Ottis" Winkler: Sure. So, I think that one of the, one of the great things in America that we have is the commercial aspect to our national defense.

I do, so I think that it's important to be able to have a commercial augmentation to what fundamentally would be a military Title 10 kind of requirement in conflict, as well as in competition. One thing that we have to overcome, and I hope that Dr. Plumb, when he rolls out this, uh, this commercial strategy, and he talked a little bit about it in his panel, it'll be interesting to see how they came down on it, is this idea of, making sure that commercial is there in time of conflict. Because the assumption is that the reason why we need that commercial augmentation, even more in conflict, is because our assets, our military, your military assets were taken off the battlefield.

The problem is we have to figure out what happens with the commercial stuff, if it's being able to be taken off the battlefield too. We have great [00:17:00] Americans. Everybody will say yes, right? We will make sure that we are there in times of conflict, but there is a fiduciary responsibility that the CEOs have that they have to protect their, in their shareholders investments.

We have to come up, we as a nation, have to come up with a way to allow them to be the great patriots that they are and still provide that those assets. After we've done that, then I think we need to go forward with the idea of tasking and figuring out how that you can actually task those in conflict or in competition in a way to be able to get things, information back to the warfighter in a quick, uh, time relevant way.

Dr. Kelly Hammett: Uh, I'll break the question into two parts and start with ground, um, and talk again about what you said, a new requirement being engendered in in space. You heard SDA talking about cyber protection, defense and resiliency. You heard General Gagnon say the same for the space industrial base for the ground systems.

That's probably the new requirement, right? Because with just information assurance and other things, we [00:18:00] have this vast array of commercial antennas of data sources. The government has a process that doesn't allow us to trust those without all kinds of artifacts and assurances, and in many cases, the commercial infrastructure is actually more secure and dependent.

We just don't have a process that allows us to understand that and certify it. Um, so I think that, that's an implied requirement for the ground and the communications and the SDA pieces. On the space side of the house, not a lot of people know, the Trump administration, right before it walked out the door, signed a national space policy and it actually established the space force as the defender of the global commons in space.

So back to, are we going to protect and defend commercial or civil or other assets? It's kind of in the national space strategy until the administration takes that back or issues a new one now. From a service perspective not the highest priority. You heard the General say, XGO, CisLunar, we've got some R& D efforts, some [00:19:00] exploratory efforts.

Um, we're gonna preserve our warfighting capabilities first. But it's kind of implied, but again, the policy and the implementation and the resourcing of that remain to be worked.

Charles Galbreath: Go ahead, Patsy.

Dr. John "Patsy" Klein: So I'll frame this response and under the adage, if you want a new idea, read an old book. And I wanted to highlight, you know, the role of commercial being integrated.

Without doubt, I'm looking forward to those strategies being published anytime soon. But the idea of proxies and proxy war is an idea that goes back millennia. If I don't have certain capabilities, but I have the economic means, I am going to procure those capabilities. So looking at Ukraine. Putin has said he sees Starlink as an extension of the United States.

Where do you extrapolate that? I think DOD and the services understand that in potential future conflict, that commercial capabilities may be [00:20:00] targeted. That's, that's not really a new or original insight, but what I usually do for the folks in uniform, I'm going to ask a question. Usually I ask you to raise your hand, uh, but I'll, I'll save you that.

So Putin's going to go after our commercial capabilities. Let's flip it. If you wear the uniform, are you going to go after the commercial capabilities of your rivals that you're fighting? And also with that, are you going to go after third parties, say, another country's commercial capabilities if they're providing military services that you need to deny?

So this question should not come as a surprise. We've seen this in other domains. For our allies and partners, they may have different comfort levels with that answer. So let's talk to our allies and our partners, "hey, we think this," you know, legal, uh, the JAGS and the GC are going to want to weigh in on the law of armed conflict.

Separating the military object from the [00:21:00] non military. Let's have this conversation. Some allies might say, "hey, I'm not comfortable with this. Your coalition is going to go this way. When it goes a different way, we'll join."

Charles Galbreath: Well, it also brings into consideration the escalation ladder. Because we, we talked earlier about how it's a higher threshold, a whole different level of conflict if you start attacking not just the United States, but a suite of allies. I guess the same thing would be true on the other side as well. So that has that escalation calculation has got to be part of it as well.

Mike, did you want to add anything on the ramification?

Okay, so let's talk about the upper left quadrant of General Saltzman's diagram this morning and how we stay there. This is where we maintain an advantage and you know, for a long time, we've talked about space from a strategic stability perspective. You know, supporting during the Cold War.

We've talked about space supporting the integration of capabilities for the joint fight in conventional conflict over the [00:22:00] past several decades. But now we're clearly talking about with the stand up of the Space Force and the recognition of space as a warfighting domain the need for space superiority. The need to be able to defend and protect our fielded forces from adversary enabled attack.

We are the Department of Defense after all. Some people might call that offense. But what, what do you think, this means for the development of capabilities? And how should the Space Force balance the responsibility for offensive and defensive counter space capabilities as we go forward? Uh, General Pepper, Dr. Hammett, since you're in the government, I'd really like to get your perspectives if, if you're willing to, to weigh in on the subject.

Brig Gen Devin Pepper: Well, there's probably some things I can't say, but I will tell you though that, I'll use space based sensing and tracking. That's ground moving target indicator for space.

So certainly as we look at a potential , PRC fight, we have [00:23:00] to do things differently in the Department. And certainly, our capabilities are required for an entire joint force to operate. So therefore, we have to really think about all the systems that we need in order for the force to be effective.

So SBST is something that we have not done before. So that's gonna be something that we can provide to the joint force so that therefore, like the Air Force doesn't have to put (inaudible) in a WEZ or in a MEZ. We're gonna have to do things from space that traditionally the air would do. The air component would do or the maritime component would do.

So that's probably, that's new for us. But that's the way that's where we're going. And there's a lot of space capability that needs to be developed and that we need to be responsible for to enable the joint fight.

Dr. Kelly Hammett: I will say this and I kind of said earlier, right? There are a number of evolving threats. Um, and we need to have a full array of various types of capabilities and kit to address those [00:24:00] threats. I'll use an air domain analogy. You heard Dr. Plumb, you know, we, you quoted our mission statement, you know, by the way, to defend space assets and protect terrestrial assets from space enabled attack.

General Schiess said that earlier, "that's what my office does." Um, you know, the question about offensive or defensive is largely, in many cases, a semantic one. Um, you know, you build a capability to have a certain effect, and I'll use, you know, offensive and defensive counter air, right? You, you put missiles on aircraft. If you wait till somebody launches something at you and you shoot the missile, it's defensive or you wait till it's inside a certain area and you shoot the airplane. It's called defensive. If you go out and get it on the ground or you get it as it's coming up, that's called offensive or, you know, SEAD.

So, the capability you developed was almost exactly the same. The TTP for how you employed it was offensive or defensive and we can argue all day about that. The vernacular is, we don't, we primarily, we're the Department of Defense. Um, so we [00:25:00] defend and protect, but, some of the capabilities we're working on currently will have, you know, varieties of TTPs that that General Pepper and his team will employ for our common defense.

Robert "Ottis" Winkler: So I think that, the idea of campaigning and the idea of space superiority requires you, whether it's in the offense or the defense, to be able to remove the enemy's assets from the battle space. Right?

And so I would put there's a well known quote. It's a little bit of a hyperbole, but we want to make sure that we bring the gun to the gunfight, right? We don't want to bring a blanket, to the gunfight, right? And so these guys take capabilities that they need, and it's important for us as Americans to be able to talk about the capabilities that they need.

I don't think it does anybody any good... we don't have to get into the classified aspects, the hypothetical aspects of things, right? All we really need to do is be able to [00:26:00] identify that, hey, we have to be able to remove the enemy's assets from the battle space, however we want to do it. General Saltzman talked about grapplers, you know, you could do that, you could do it however, whatever way you want to in the debris causing or non causing way. However, the United States government wants to set that in policy, but we owe it to the men and women in the Space Force as well as in the Joint Force to be able to talk about it.

Charles Galbreath: Mike?

Mike Nelyon: So I agree in concept across the board here, I will say from a contractor position, I'll speak to the behaviors. We are here to make sure that we deliver the capability that is asked for in a timely manner when it needs to happen and then adjust as necessary. Adaptation, to ensure that we can adapt against a thinking adversary, that is on us as well as on the government. And finally, transparent collaboration. We can't get one step ahead from an industry perspective to make sure we're in a ready position to offer [00:27:00] capability unless we're already talking. Which is why I'm a huge advocate and we've seen great success, in tight operator feedback.

Uh, so we know where things are important, where things are not and pick the right path for technical development.

Dr. John "Patsy" Klein: So, to answer the questions specifically, we need to emphasize more defense than offense. You still need to have the offense. I'm going to be going somewhat against the grain and I'll make the statement that the space domain is not inherently offensive dominant.

So Ben Stutz over here, he says "hey, Patsy, please quote some Clausewitz for me and help me understand." So Clausewitz said, "the defense is the stronger form of war." Full stop. And a lot of folks will say, "well space is different." You know, we, place stuff in low earth orbit. Very vulnerable. This idea of first mover advantage or second mover disadvantage.[00:28:00]

So a lot of folks, uh, understand Clausewitz wrote on the general theory of war, most specifically on the land warfare. What was he talking about the defense? He was talking about fortifications, moats, high walls. We understand that in the land domain. If you remember back in colonial times, we had this great operational concept where we were going to line up, lines of troops and trade volley fire, musket fire.

You didn't want to be second in that one, okay? So that was, if that was your idea of the defense taking the blow when you're making yourself in a, putting yourself in a vulnerable situation, that is not taking advantage of what Clausewitz (was saying). . Clausewitz was saying making preparations. What am I saying? The U. S., its allies, cannot be put in their high value assets and vulnerable positions. That's not taking advantage of making preparations per the teachings of the Clausewitz and others. Again, that goes back to mission assurance and resilience.

Dr. Kelly Hammett: Hey Charles, just [00:29:00] overall, one thing that ran through my mind earlier and the whole tone of today is essentially, since we're talking doctrine from Clausewitz, is the Chief's second tranche of doctrine, if you will.

He said he's been in the job 15, 16 months. Um, his first tranche of doctrine actually had, and just like the Chief, I was once a captain in the United States Air Force. You go to squadron officer school and it's always three.

Alright, there's three, three main bullets in every MESO. He's got three. This is his second round. The first round also had three. LOE 1 on the first round was deliver combat credible forces. So, that was number one is, to have the kit we need to fight if we need to fight. And now he's shifted to, but we don't really want to go to that fight.

Because it might not be responsible, it might threaten the space environment, it might lead to escalation and other things, but his first round was give me the kit I need to fight, if I need to fight. Of course the second one was amplifying the Guardian spirit and the third one was partnering to win.

But I just wanted [00:30:00] to connect because there was a lot of conversation earlier about are we in conflict, are we in competition, are we going to stay in competition, are we going to go to conflict, we need to be ready for both. And he started with conflict and now he's back to, but let's not go there if we don't have to.

Charles Galbreath: And the best way to deter is to prove that you're going to win the fight and they're going to lose and therefore they're less inclined.

Brig Gen Devin Pepper: Let me, let me just follow up. It's something we talk about all the time. Again, space superiority. I think, you know, for my air breathing compatriots here.

We can, if we cannot achieve space superiority, then again, the joint force loses. So, you know, regardless of what we're talking about here, as far as offensive defense, everyone knows you can't win the Super Bowl just playing defense. You have to score a point. So we have to achieve space superior in order for the joint fight to win.

Charles Galbreath: Great. Thank you. All right. The, (applause) yeah. Um, the last question that I've planned for us is the same we wanted to ask everybody that's been a [00:31:00] theme throughout, and that is to foster the debate about the theory of competitive endurance. And so whether it's specific to responsible counter space campaigning or the overall theory of victory that is competitive endurance.

Is there something that you would like to see changed or modified? Or was it perfect? And General Pepper, we'll save you for last, just in case you're going to say General Saltzman got it perfect.

Yeah, Patsy, let's, let's go ahead and start with you.

Dr. John "Patsy" Klein: Sure. I'll give you the somewhat, academic answer.

Benefits of writing books as you get to research and study what others have written before you. So, this, the last one I used irregular warfare as a framework to think about competition and crisis. I started off, uh, a couple of decades ago

using a maritime analogy, Corbett in orbit, which is fine, but competition and crisis that we're seeing now in an irregular warfare framework, it takes you to a different conclusion.

[00:32:00] So, part of it, you can't just admire the problem, you gotta give solutions. I tried to give some solutions in the last chapter. A publisher will say, "never give away your baby. Tell people your, your final, so what." But I'll give you this "so what". I came up with 10 recommendations, 7 of those are non material solutions.

So sure we need hardware, sure we need shiny things to out compete China, in the space domain. But China and Russia have our number, (inaudible) keeping the... (inaudible) competition below the threshold of armed conflict where you don't have the inherent right of self defense, kicking in, collect assertive security agreements.

So there's a protracted nature of it. There's time as a weapon. There's an indirect approach. There's a use of proxies through commercial and the like. But for our allies, working with you is key. Commercial, updating our strategies, and then also training and education. [00:33:00]

Charles Galbreath: Ottis, if you can get that mic to work.

Robert "Ottis" Winkler: Yeah, I think I got it. We'll see.

All right. So, I think that the one thing I would add in light of this panel and the discussions that we've had is, should deterrence fail, dot, dot, dot, right? And so, I think that if we could focus a little bit more on the actual combat in space, however that looks, right?

What tools that you need, right? But one of the things that Dr. Hammett is doing with things like SCN augmentation and SCAR and the great work that that's doing. To be able to prepare for when the enemy gets a vote and applies kinetic effects to us. I think that's the, one of the things that the, that would help frame the whole argument.

Charles Galbreath: Mike?

Mike Nelyon: I think the dialogue today exposed at least a thought that I was having while I was sitting just having lunch regarding the irrational actor. Besides that phenomenon though, within that structure as presented, I think I

[00:34:00] wouldn't change anything, save I would exercise more on the surprise factor.

Uh, you may have the greatest in terms of capability, you might even be dominant in capability, but you can still be surprised. And, you know, having worked in the, I'll say in the immediate area, or near area, in operations for a number of years, you know, coming into a pass and seeing an anomaly and wondering what the heck just happened. You know, there was a comfort I had back then, I didn't know I had it, but in the sense that this is a benign thing.

It's probably just a malfunction and have to go work through it. If I were in ops right now, I don't know if I could say that anymore. And that's a scary phenomenon. And so understanding the context of the environment. So that surprise is not a factor. So it doesn't undercut any of the capabilities we are advancing.

I think exercise, exercise, exercise it. You will not be able to predict what that looks like just fundamentally. However, you can start working through your responses and how to deal with the uncertain. So, and that's just speaking, uh, quite frankly from my own experience, not as a blue [00:35:00] suit, there was a contractor ops but still, that's where I would put this.

Charles Galbreath: Dr. Hammett?

Dr. Kelly Hammett: I guess I would start to say that we're starting to see in terms of facing the warfighting aspects of this. The service, the Space Force, has segregated, you know, with components, supporting the combatant commands and an organized train and equip function, a test and training function, a futures command function that's going to be put in place.

I think they get the operational level of war, the readiness that has to come together. The Space Force is really making some significant muscle movements on that piece. Where I'm getting increased awareness with my interaction across that whole range with the combatant commands with Dr. Plumb is the whole spectrum.

And again, having a coherent strategy across the whole spectrum and options coupled with messaging that manage your movement up and down is we haven't figured out at all yet. And that, now where [00:36:00] I'm, because if we, we pull one of our gadgets out and start using it, that may throw us somewhere where we don't want to be quicker than we're ready to go.

Charles Galbreath: General Pepper?

Brig Gen Devin Pepper: Well, I'll just sum it up to say that, uh, you know, of course, for all of us old heads in a room who came up when space was a benign environment. To your point, we didn't have to think about any threats to our capability, but now we have a lot of lieutenants and Guardians and specialists who are thinking through that, that threat.

So if you do have an anomaly, you know, maybe it is a cyber attack. Or what is my intelligence warning tell me that's taking place to my asset. So, so we have Guardians now who are thinking through how do I operate differently in a contested environment. And that's different from what I came through.

We have Guardians right now who are developing TTPs who are putting together who have mission essential tasks that take the threat into account that we never had to do. So certainly, I [00:37:00] think for us, it's a matter of getting our younger Guardians and just moving out of the way and getting them thinking through that threat and how to defeat it and how to deter it.

Uh, because right now, I think we are, we're seeing some, some good results over our younger, Guardians who are really operating in a contested environment. Who don't have the luxury of going, "Hey, it's just an anomaly. It's a single event upset." No, I have to think through that someone's trying to get into my network.

Charles Galbreath: That's great. Thank you very much all for a wonderful discussion. We do have some time, uh, for questions from the audience. So by now you understand the drill. If you have a question, please raise your hand. I think we've got one mic that's floating around out there.

Anybody?

Question 1: Hi, uh, Courtney Alban with C4ISRNET. This might be like a little bit redundant to the last question, but Secretary Kendall has talked about you know, wanting, being concerned about the Space Force not moving fast enough [00:38:00] on his first operational imperative, building a resilient space order of battle and wanting to see, wanting to be able to invest more in counter space capabilities. I'm just curious from your perspective, you know, um, where does the Space Force need to be investing to go faster? Um, what are the impediments to that? Um, I understand maybe can't get into specifics, but can you kind of talk a little bit about kind of, where those priorities should be in this area?

Dr. Kelly Hammett: I'll talk fairly generically and then I'm not kidding, I think the General, based on the conversation we had last night, might talk about this. We, we have a lot of irons in the fire. We're building new capabilities, trying new things, trying to get to assets on range that the operators can test and train against.

It's not the force structure overall that we're gonna need to have combat credible forces and to be able to compete and deter and potentially fight and win against the vast array of [00:39:00] assets the Chinese are putting on orbit. You heard 400 LEO ISR birds. You know, they're launching a hundred satellites a year, and most of them, uh, Greg didn't say this, but well over half of them are space war fighting satellites, right?

They're, not largely commercial. "Oh, how are we getting all these birds up?" They're Starlink, they're SpaceX. Our military launches are increasing, but it's not the amount of kit, and the Chief said he's, you know, gonna talk about this at AFA in two weeks, he's gonna roll it out in the posture hearings, so I hope I'm not getting out too far in front of him, but he said space superiority will be his his topic. Uh, the Secretary has said, for 24 and 25, the budget is adequate, but it's not really all that we need. To have, you know, the fully, burden combat credible forces. It'll give us something to maybe compete and deter.

But if the balloon drops, is it enough to win? Don't know. That remains to be [00:40:00] analyzed and assessed.

Brig Gen Devin Pepper: I'll just add on just, you know, the things that we need in order to potentially to win against a fight in 27, we need delivered by 25. So and I'd say this to industry, if there's capability that you are delivering to us, then we have to be able to integrate it and train, train with it. Exercise with it to be ready to execute it by 27. So if it's coming to us after 25, it's going to be late to need. So, I just, I bring that out that again, use that old saying, you go to war with you know, the military you have not the necessarily the one you want. But the one I need, I need by 25. So, anything you can do to accelerate that, then certainly, uh, I'm all for it.

Charles Galbreath: Well, that's, that's an important point. It's not just the delivery of capability, but it's the fact that you, you give your guardians an opportunity to train with that capability and also to integrate it in with the joint forces as well. [00:41:00]

Robert "Ottis" Winkler: Forget it. Bad idea.

Charles Galbreath: Great. All right. If there aren't any, Oh, there is one more question.

Question 2: Yeah, Mike Barnes from Leo Labs. In some of the briefings, recently the, in the kill chain, they've been showing commercial SDA providers such as Leo Labs and Kratos and, uh, Slingshot and Exo. These companies are now operating in the JCO. How will the transition happen?

Is it through CASR or will there be some other vehicle to bring the commercial SDA providers into the kill chain?

Brig Gen Devin Pepper: So, yeah, I'll just say it's probably through CASR. Uh, again, once our, I'll let General Saltzman roll out the commercial space strategy. But CASR is one of those things that, again, we have to have those contracts in place, uh, before a fight begins, right?

So we have to know how we can leverage commercial and what capability commercial is bringing to us. Uh, for resiliency, [00:42:00] replenishment, et cetera and we have to know that up front. So we can bring it in in a timely fashion. But there's some other avenues in which we're leveraging the commercial.

Dr. Kelly Hammett: Yeah, so, so two years at Space RCO, 25 years in Space Domain Awareness and so this is not a new problem. The JCO right now, uh, purchases commercial products. So the commercial companies, you know, make observations, they process the data, they give a briefing or an indications and warning report or something like that.

The hurdle is, and this is what I alluded to earlier, is actually integration of the data. So that you can fuse the commercial data and so we have to get over these trust issues, these cyber assurance issues. So I don't know what the mechanism is, but, you know, I've been pounding on General Schiess for a while. When are you gonna actually ingest the data and fuse it with your very sparse SSN collections? So that you have timely and accurate and highly resolved, um, SDA. And that's the real challenge. And I don't know what the commercial strategy will say. I [00:43:00] will try to answer, based on conversations I've been in, um, I think it was John earlier, what's one of the big rocks? The big rock that the chief sent it back for was the commercial space strategy wasn't, um, ambitious enough.

It talked more about, we'll let some contracts, we'll buy some services. And he's like, "no, when are we gonna, when are we going to get after the real problems?" But I don't know what's in it because I haven't been part of the team. But I do know that's part of why he sent it back as he was not satisfied with the level of depth of commercial integration that was being proposed.

Charles Galbreath: Great. Thank you very much. Unfortunately, that is the, the time that we've allotted, uh, for this panel. I want to thank my panelists, for a great discussion, for your insight. On behalf of the Mitchell Institute. And thank you all for, for sticking around today. Uh, please, we're going to take a quick break.

Uh, but be back in place at 10 after two for a closing keynote and please give a round of applause for our [00:44:00] panelists.