



Lt. Gen. Dave Deptula, USAF (Ret.):

Well, thank you and good morning, ladies and gentlemen. And welcome to our Mitchell Institute panel on the future of air and space superiority. Today, I think all of you are very well-aware that the United States faces quite a number of growing threats. China's clearly demonstrated advanced capabilities to counter US air and space assets. Russia continues its aggression against Ukraine, threatening the use of nuclear weapons. Iran could acquire nuclear weapons in a matter of a few weeks, and North Korea continues its testing of ballistic missiles that could be topped with nuclear weapons at any time.

Now the United States Air Force, the Department of the Air Force, is having to confront these threats at a time when it's the oldest and smallest in its entire history. The Space Force continues to be stretched as mission demands exceed its manning capacity and budget. But what we do have are some incredible Airmen and Guardians in key leadership positions helping chart the way through these turbulent times. Three of them are with us here today. Air Combat Command Commander General Mark Kelly, Commander of US Air Forces in Europe and Africa, General James Hecker, and Major General Douglas Schiess, Commander of Combined Force Space Component Command and Vice Commander of Space Operations Command.

So what I'd like to do to start our panel, is to give each of you an opportunity to share your thoughts on the future of air and space power, in order. So the floor is yours, General Kelly.

Gen. Mark D. Kelly:

Okay. Well, thanks. It's great to be here. It's good to be back here. As far as space power and space superiority, I'm going to defer to my Guardian friend way off to my left, your right. But I will say, in terms of space power and space capability, as a force provider, I'm honored to send forces forward to General Hecker and General Wilsbach and General Grynkewich every day. And as we send those force elements forward to these C-MAJCOM, C-NAVS to utilize. We lean very, very heavily on General Minihan and General Van Ovost and the entire logistics chain. Because once I push a force element forward, General Hecker, General Wilsbach, General Grynkewich, et cetera, can utilize that force settlement as they see fit, to execute their theater campaign objectives. And that may very often put that force settlement in a threat ring. And that threat ring means we have to almost certainly do agile combat employment to make sure the survivability of the risk of force to that force settlement.

So point being is to move a force settlement forward again, it's a big logistics move. It's a big logistics move in theater. Now I've got to feed it, now I've got to fuel it, now I've got airbase defend it. And it's in a threat ring so I may have to medevac it. So the force elements that we must send forward to ACE today, I'd highly recommend we have a discussion as an entire force to put in space tomorrow. And so we do that every day with communication architecture and if we've got an ISR capability, a segueing capability, electronic warfare capability and moving target indicator capability that we can migrate into space, it's a big burden off of our feeding, fueling, protecting medevacing. And so I'll let Doug correct me a hundred percent on everything else in space. In the air domain, five years ago we were not having our fighters interact with Chinese fighters on a routine basis and exercises.

We were not having per your reference fighters merge with Russian fighters weekly, if not closer to daily over Syria. There's a few reasons that that's happening. One is that they want battling practice against the best in the world and that's available for them. The second is a direct challenge to the post World War II rules-based construct that we all grew up in. And the third is, and we know this from insights, is they feel pretty confident they can compete in this arena. And they feel they can compete in this arena because they know what we know. And that is we have the finest Airmen in the world, but our air superiority enterprise, they know what we know. And that is AWACS C-3 flew first in 1977, EC-130 which is a key part of that architecture first flew in 1981. The F-22 that John Hecker and John Wilsbach first



flew in 1997 and over a quarter of a century ago, Captain Hecker and Captain Kelly went down to Tyndall to shoot A120s.

All of those capabilities, our sensors, our weapons, our platforms are significantly improved and modernized than they were back a quarter of a century ago. And it's a credit to our Airmen and industry to keep them up to date. But there comes a time when you've squeezed the last ounce of combat capability out of our sensors, weapons and platforms. And some of them, those dates have come and gone and some of them are approaching rapidly. And so we need E-7, EC-37 and GAD and CHATHAM yesterday and appreciate all the industry work and across the services.

The last thing I'll leave the team with here is I arrived yesterday coming from Savannah where we're holding the William Tell Air-to-Air competition. It was the first time we've sanctioned it for 19 years and we started it in 1954 of a direct response to appear adversary challenging us in air superiority. And we had to have it and we stopped it 19 years ago greatly out of a perception that we didn't have a competitor in air superiority.

And so 20 years ago, 30 years ago, we know when the world knew that if anyone got airborne and wanted to face off the United States Air Force to their superiority, there was going to be an ax murdering on the other side. They knew that. Today they feel they can compete. So the reason we've sanctioned William Tell is we owe our Airmen all the highest in training in the reps and sets we can get them. Because we also know from high-end exercises and also other studies, that not all of our Airmen will come back from a pure fight. Today's air-to-air superiority fight will be an absolute cage match and we owe them those reps and sets and we owe them an environment where we treat air superiority as if our lives depended on it. So thanks again.

Gen. James B. Hecker:

Well, thanks General Deptula, and Grace, appreciate those thoughts and thanks to the Air and Space Force Association for giving us the opportunity to talk to you for a little bit. I'm going to talk to you from a USAFE standpoint. In particular the lessons that we've learned from the war that's been going on in the Ukraine for the past 18 months, since February of 2022. And I can pick up basically where Grace left off on the importance of air superiority. I think most folks thought that this war would be over in two weeks, maybe a month. And here we are 18 months later and it's still going on. And the reason that that is because neither side has been able to gain air superiority. And when you don't, you end up seeing the fight that we're seeing today. Which is 155 rounds going back and forth, huge destruction of you name it. Cities, schools, hospitals, mass casualties on both sides.

This is a fight that we don't want to fight. And so our priorities in USAFE are to make sure that we don't have to fight that fight. And we're doing that through a series of five priorities. And the first priority is to make sure that we can do counter anti-access aerial denial. We need to make sure that we have the ability as an Air Force and also for our Ground Forces, our Navy forces and our Space Force that we have the ability to go on the offensive. That we're not just on the defensive.

And in order to do that, we have to degrade a very sophisticated integrated air and missile defense system that Russia has. And we're in the process of making that happen in USAFE. We had our first ever Web Tech where we call all 31 countries together and we talked about how we're going to do this. And we have a plan in place that goes through the fall of 2024 that culminates and a Ramstein flag where we're going to practice this for two weeks. And we have a stair-step approach to get there. But we need to make sure that we can get there because right now I think a lot of the other services assume that they're going to have air superiority like they've had for the last 30 years.

Well, that was an uncontested environment and this is not an uncontested environment. So we're going to make sure we're ready for that fight and that we can gain air superiority through counter A2/AD. We



also know that if Russia does not have air superiority, we know how they're going to fight. They're going to send one-way, UAVs our way to NATO. If we declare Article 5 and try to destruct our infrastructure. They're also going to take cruise missiles off their long range aviation bombers and they're going to shoot them at long range to come at us. In order for us to defend against that, we have to have a sophisticated integrated air and missile defense system and we're going towards that effort in NATO. Over the last 30 years we haven't really concentrated on that enough. So now there's a lot of concentration on that.

And then our third priority is to make sure that we are as capable as possible to deter Russia. And the way that we do that is through information sharing. We have to make sure that we share information with our partners in NATO. Likewise, they share information with us. And by sharing this information, we can make both sides NATO very more capable than it is right now. And we can do this for free. It's a policy change, it's a stroke of a pen and we've been doing that. We've had several successes where we've been able to share information that has drastically increased the capability of air power in NATO just by sharing information and it's free.

The third thing that we're going to look at is command and control. We know that they are going to try to disrupt our command and control capability and we need to make sure that we have a resilient communication. And can do distributed operations for command and control to make sure the folks in the field get the direction that they need. And that might be in the form of mission type orders or it could be an ATO, it just doesn't matter, but we need to make sure that we're ready for that. And then lastly, we need to make sure that our airplanes and our assets don't get killed on the ground. And through agile combat employment, we can make sure that this happens.

When I talk to the chief of staff of the Air Force for the Ukraine, they almost never take off from an airfield and land at the same airfield. They're always changing it up and they're doing it inside the targeting cycle of Russia. And it's been very successful and we need to make sure that we're poised to do that as well.

Maj. Gen. Douglas A. Schiess:

General Deptula, thanks to you and the Air Force and Air and Space Force Association for having this panel. It's great for me and Airman that's turned Guardain to be with three Airmen superstars, so appreciate me being allowed to be here. I have the distinct pleasure of being dual hatted as the vice commander of Space Operations Command, which is the field command in the Space Force that generate presents and sustained forces to combatant commanders. Primarily US Space Command, but to any combatant commander as well. And then in my joint hat, I am the commander of the Combined Force Space Component Command that takes those forces and then on behalf of General Dickinson at US Space Command, executes those operations command and control for those forces. That provide all of the necessary space related capabilities to the war fighters and to those to be able to do the things that they need to do to be able to get their mission done.

It's a pleasure to represent the women and men of Space Operations Command and CFSCC. Right now as we are all sitting here, they are on operations floors in operations centers doing the mission each and every day. As the CSO said this morning, they're providing global position and navigation. They're providing missile warning to make sure that our forces that are deployed are safe and secure. And they're also in, as the CSO has said in his theory of success, they're in competitive endurance right now with our adversaries. They're going against them. They're there making sure that we can continue to have space superiority when we need it. How do they do that? They do that under the CSOs three lines of efforts and that's field combat ready forces. And so those are the forces that we get ready to be able to do the mission that they have to do on a daily basis.

That means they have to have advanced training. That means that they have to be ready to do that on a moment's notice each and every day 24/7. We also then LOE number two, we amplify the Guardain spirit. We push things down with mission command to the lowest level so that our NCOs and our CGOs are making the decisions on a very quick timeline to be able to get the effects and the capabilities to the war fighter when they need it. They're also looking to the future. How do we do this in the future to make sure that we can continue to keep space superiority? And then lastly, we're partnering to win. I know a lot of my colleagues here that we work together at the Combined Space Operations Center. I'll do a shout-out to the UK, Australia and Canada that are here that we work together each and every day to be able to get after that mission.

So you might add is how do we know that we have space superior? Well, I can tell you we have a couple of adversaries out there that are trying to make sure that we don't. They're trying to deny our ability to operate in the domain and to be able to take away those capabilities. And we have to make sure that we have systems that we need the Congress and the Department of Defense to give us to be able to get after that. But then we also have to make sure that we have the Guardains that can do that. And then one last plug. We can't do anything in the Space Force without the Airmen that support us from a standpoint in our bases and we really appreciate that. So thanks sir.

Lt. Gen. Dave Deptula, USAF (Ret.):

Well thank you all very much for those perspectives. Now let's jump into some more detail. For each of you looking at the war in Ukraine. Some of this has already been mentioned, but it's beyond clear why air and space superiority are so important. Could you share with the audience some of your key air and space power lessons learned? And the key part of this question is given these lessons, do we need to revector some of our own force design?

Gen. Mark D. Kelly:

General Hecker already chatted. He gets to see the tactical lessons every single day with his hat and all of our NATO partners. So from a broader perspective of Air Force force structure, if you would, for any air force to execute air defense take down in a modern threat environment. And to establish their superiority time and place of their choosing to enable global position attack in the time and place of their choosing. So they set conditions for a short, low casualty ground campaign, kind of like a desert storm of a 100 hours. That's hard. It's hard and it's expensive. But hard and expensive for an air force is way easier than losing as a nation. And my personal opinion is that's the trade space we have. So I think it's a question, rhetorical question for the nation, what we're doing. There's a lot of competing priorities and so it's not easy. It's not the stroke of a pen.

And so whether it be 1914 Europe or whether it be 2022, 2023 Europe or anywhere else on the planet, if we can't field the force structure, we need organized, trained, equipped Airmen. Then what you see what General Hecker referred to is months now, years of bloody trench warfare and a grinding artillery dual with the loss of tens of thousands of your sons and daughters. And so that's not anything anybody is keen on. So it's a tough business that we have to execute. As far as to the second part of the question, do we need to revector any of our force structure? As Secretary Kendall says, if it doesn't scare China, I think a subset of that is if it doesn't contribute to an air defense take down establishing your superiority, establishing conditions for global precision attack. We need to have a hard look at, and I think he says it as good as anyone. Thanks.

Gen. James B. Hecker:



Let's just do a for instance, what if Russia continued to try to take down the IADs of the Ukraine and they were able to gain air superiority? What would've happened? What really has kept the Ukraine in the fight is all the support they have gotten from NATO countries and several other countries. Whether it be giving them harm missiles, whether it's giving them HIMARS, whether it's giving them JDAM ER, but this has kept them in the fight. If Russia had air superiority, none of that equipment would've got to Ukraine.

As soon as it was put together in Poland or Romania and put on a train and cross the border into the Ukraine, there would've been a combat air patrol that was up top. And the cast would've taken that out and they wouldn't have got any of that equipment and we wouldn't have been talking about this right now and Ukraine wouldn't be where it is today. So that just shows how important it is. Now, likewise, and I don't want to steal your thunder, but all the equipment that we are giving them, most of it depends on space superiority and what we get from space. So just as important as air superiority is space superiority as we move into the future.

Maj. Gen. Douglas A. Schiess:

Sir, thanks for the segue there on space superiority. So, obviously we have learned lots of lessons from the Ukraine. I'd say the first one is proliferated low earth orbit communication satellites. And the ability to provide communications when we thought maybe we wouldn't be able to from jamming and other things. Obviously in the fight there we have seen electronic interference for both satellite communications and GPS and we have to realize that we're going to have to fight through that. And so there's air parts to that and other domains of how they do that. But there's also on the space force of how do we make resilient architectures to be able to get after being able to continue satellite communications in a denied environment. And also navigation.

I think the other thing that we've learned is missile warning and the ability... We've done this for years, but the ability to warn our forces that a missile is incoming to them and that they need to take shelter and then also that helps with missile defense and other things like that. So those are the main things that we have learned. But I think also in the space community that we've been doing for a long time, but that we are continuing to excel, is our partnerships. And so obviously General Hecker talked about NATO and how this has brought NATO together. We're doing that on the space community as well. How do we bring our partnerships together? And we know that in any future fight we're going to have to work together. We can't do this as just the space force. We have to work with our coalition partners.

Lt. Gen. Dave Deptula, USAF (Ret.):

Very good for Generals Kelly and Hecker. And when people think about air superiority, they often focus on the aircraft. Obviously they remain key, but we do live in the information age where data processing power and connectivity are critical. So could you walk us through your thoughts on this broader information age approach to achieving air superiority?

Gen. Mark D. Kelly:

No, it's absolutely front and center. And so if I had to pick a topic each day that I focus quite a bit on, it'd be the entire, if you would, electromagnetic spectrum. Everything south of ionizing gamma down a single hertz through the UV and the IR waveform. So we've got to make sure we don't just survive, we thrive through that.

Two subsets of the EMS is frankly for air superiority, we have to have a robust and resilient and high bandwidth data link that can handle a really contested EMS. And the other one is I need a robust and resilient precision navigation and timing reference regardless of where we are on the planet. Besides



those subsets of the EMS, we need good air domain awareness to know what's going on around us, and there's a lot of E and E7 which will help with that. And we got to make sure that not just our platforms and our sensors can thrive in that environment, but our weapons have to be able to thrive in a very, very robust EMS environment. So I'd say overall, that's the topic that consumes most of my energy in terms of data.

Gen. James B. Hecker:

And this goes basically to one of the priorities I mentioned, which was information sharing. I could do a counter A2/AD mission with a US only package and probably take out one set of their IADs, but that's not going to be good enough. We're going to have to do more than that. So to be able to do this at scale, I need to share information with our other 31 allies in NATO to make sure that they have that information so that they can take out. And we can do this at scale and take out several IADs as just opposed to one IAD. And that's what we're getting towards as we move forward. When we were getting together the group to do the first ever NATO Web Tech, we were able to share information that we haven't shared before. And that gave the fourth gen assets that we have there a lot more confidence in what we were asking them to do on a specific mission. Because they knew that they were going to be protected because they didn't realize this capability existed.

So those small things make big differences as we move forward and will allow us to do this at scale because we can't wait 10 days to get air superiority. If we wait 10 days and Russia masses on the Baltics Eastern front, we're in trouble. Okay, they're going to be all the way through the Baltics by the time we're able to counter that, get air superiority and help stop that. So we need to share information to make sure that we're as capable as we can from the get-go. And it doesn't take weeks, it takes days to get that air superiority that we need, at least on the Eastern front to start with.

Lt. Gen. Dave Deptula, USAF (Ret.):

Major General Schiess, commercial space capabilities have played a key role in Ukraine and the same is going to hold true for future conflicts. How do you see this capability and capacity evolving to meet future demands?

Maj. Gen. Douglas A. Schiess:

Thanks, sir. That's a great question. So, one of the things that we do at the Combined Force Space Component Command, and actually the CSpOC that does the command and control there is we have what's called the commercial integration cell. Right now that's 10 different companies that provide services to the United States Space Force, but to actually all of the services. They have individuals there that have the classification levels up to top secret SEI. They sit on our ops floor, not all of them all the time. Some of them ramp up and go back home or come when there's something going on or missions ongoing. But that has allowed us to talk to them at the classified level, provide them the threats that are out there. For instance, when we had the Russian anti-satellite that caused debris, we were able to quickly give that information out to those commercial companies so that then they could take any actions that they needed to if there was debris.

We do that on a daily basis from the 18th Space Defense Squadron that provides collision avoidance information. We do that to a larger group, but this commercial integration cell allows us to provide that information. As we continue to grow with more commercial applications, I think of imaging and others that are starting to get out there. We're going to have to find out how do we command and control those? How do we bring those into the fight? And we're already working that at both the Space Operations Command and the United States Space Command on how we get that right now. It's a lot of



we ask not task because they are companies and we have contracts. But we're going to have to get into a situation where we actually are saying, "Hey, no kidding, your satellite is at risk and we need you to do this. We also need you to be able to do that."

Now in return, they're going to say, "How do you protect me in this environment that is getting very dangerous in this contestant environment?" We're going to have to work through how we do that as a nation as well. But it is key and we've seen that in the Ukraine fight, but we've also just seen it in how we do operations. Commercial is there. One of the last things I'll say is we're working through as like the craft. Do we have a same thing for space? We have individual companies that are doing what they do on a daily basis, but when we need them to augment our forces, do we need more Satcom? Do we need more imaging? Do we need more unclassified imaging that we can then provide to new sources to prove that someone is not doing actually what they're saying, that there's attribution of what they're doing. So we have to work through that, but that is definitely something that the Space Force and Space Commander working on.

Lt. Gen. Dave Deptula, USAF (Ret.):

Great. Thanks very much for that. Let's stay on space for a second. And Doug, tell us if you would, how do you conceive of achieving space superiority as we move into the future?

Maj. Gen. Douglas A. Schiess:

Now sir, something that we think about every day and how do we do that. In Space Operations Command we like to say one of the ways that we have to do that is we have to have intel focused, cyber secured, combat credible forces that are partnered with our coalition and our mission partners. So what does that mean? Well, so intel focus, we have to have the right intelligence to be able to know what is going on in our domain. To my airman colleagues, that sounds a little like, "What do you mean you don't know what's going on in your domain?" We have to have space domain awareness. We have to know what our adversaries are doing, when they're doing it. We have to have intelligence officers that are getting after that to say, "Hey, this might be the intent of what they're doing." That has to then feed into our operations.

We also have to be cyber secure. Obviously everything that we do in the space domain goes through the cyber. As general Kelly was talking about the EW spectrum and everything that goes through that. How does it get to the satellite? How does it get back down to the user? Can that be jammed? Can it be intercepted? And so we have to make sure that all of our capabilities are cyber secure. How do we do that? We have mission defense teams that are getting onto our weapon systems that are providing that. They're sitting right with the operators. As a matter of fact, they're all operators. The intel, the cyber and the space operators are all operators. They're sitting right with them and they're saying, "Hey, there's something here on the system. We need to make sure we get after that. We need to eradicate it and then we can continue to do our mission."

And then we have to be combat credible. How are we combat credible? Well, we have to do our reps and sets. We have to make sure that we have advanced training. We have to make sure that we have the best trained operators in the world to be able to do those missions that we need them to do. We have to give them the simulation that they need to be able to do stuff that we don't do on a regular basis so that they're prepared when war happens, they're prepared when they're contested. And so we have to make sure that, and then we have to do that with our partners. We have to make sure we can't do this alone. Obviously the space domain is huge, but we have to make sure that we're not duplicating with our partners, but we're working together so that we can do space superiority on a daily basis.



Lt. Gen. Dave Deptula, USAF (Ret.):

Very good. Now, something that you said right up front is a nice segue to this next question. Which is that one of the most important elements in seeking superiority in any domain, general Kelly already mentioned it, is spectrum superiority or spectrum warfare. So we're not going to be able to have aerospace superiority without spectrum superiority. So your thoughts, all of you, on how we up our game in this particular important mission area?

Gen. Mark D. Kelly:

No, as I mentioned it definitely consumes a lot of time and energy and focus. Just prior to World War II, one of the best quotes, accurate quotes came out of an army, British Army general Phil Marshall Montgomery. When he said, prior to the Battle of Britain, "If we lose the war in the air, we're going to lose the war and we're going to lose it quickly." And I think now fast-forward 80 years plus later, if we lose the war in the EMS, we're going to lose the war and we're going to lose it quickly. And so it has to be part of our focus. And the EMS, although we focus as Airmen and Guardians on the EMS, it's not just a Air Force Space Force challenge. It's a navy army, DOD national focus Because it's like well like the Arctic or International Airspace and water space and cyberspace. It's a global common. Everyone in here right now who's got a phone on LTE or 5G or wifi is in the EMS and it's free for using for people to access.

And so when you have a global common, and nations can do what they want to do inside their sovereign space. But when they develop so advanced capabilities that they can actually influence outside their sovereigns into other common areas, like they can project and control the EMS outside of their sovereign water, air, et cetera, and they have the will to do so, that's a problem. We cannot get pushed out of a global common, whether it be the EMS or et cetera. Closer to home, we've had a lot of effort and energy with the three 50 spectrum warfare wing because we've got to be able to reprogram and give back to our EMS excellence at the speed of relevance. With respect to our platforms, the highest VIS platforms that you think of.

Obviously EC-37 is key, and frankly, if you look at what that capability does, you could argue it's an EA37 because it's got a lot of attack capability. And I already mentioned there's a lot of E and E-7 and the other, even the fighter platforms, you'll see a lot of written on F-35, tier three, block four, et cetera. At the end of the day, it's to enable very, very powerful electronic warfare to thrive and survive and defend and attack. Same thing with F-15EX EPAWSS, Eagle Passive Active Warning Survivability System, is to get that platform into a modern war fight. So we've got to stick the landing on those capabilities going forward.

Gen. James B. Hecker:

Yeah, to get air superiority the last time we really fought for it was in Desert Storm, and we got it pretty quick within a couple weeks. You probably remember that as being part of the-

Lt. Gen. Dave Deptula, USAF (Ret.):

Just the land.

Gen. James B. Hecker:

Yeah. It was primarily air that got it back then. Today it definitely has to be multi-domain, and we have to consider the EMS. When we had our web ACK and use safety and we looked at this space was a very important part of what we planned. Cyber was a very important part of what we planned. We had Army folks there so we could use their ATACMS. We had Navy folks there so we could figure out what we're



going to do with their cruise missiles. Special ops was a very important part of the plan. So it was multi-domain. We used everybody, and that's what it's going to take to do it this next time.

It's not going to be as easy as it was over 30 years ago. So we've got to make sure we're prepared and we've got to be prepared for EMS as well. And that's going to be extremely important because our adversaries are getting some game when it comes to jamming and those kinds of things of different things that we're not used to. And we're coming up with tactics, techniques, and procedures to get around some of that. But it's really going to be us working with industry to come up with new techniques, new equipment to make sure that we're protected against EMS, so they're not able to hamper what we're trying to do.

Maj. Gen. Douglas A. Schiess:

Hey, sir. So in the Space Force, we have a whole delta, Delta 3 that is our electromagnetic warfare delta, and they do both electronic attack and electronic support. And this is where another attribute that we're doing in space superiority is, as General Saltzman talked about today, we're standing up space force components that are out at the combatant commands. And so one of the things we have to do with this electronic support and electronic attack, is push those forward to the combatant commanders, to General Hecker and to those forward. To be able to win, have a common operating picture of the electromagnetic spectrum so that we can develop the tactics, techniques, and procedures to maybe get around some of this jamming. And then I'd add two in there, proliferated low earth orbit helps it. Makes it much harder for the adversary to jam if they have hundreds of satellites to get after instead of just one.

So those are the things, the common operating picture. But then we also have to, right now we are outgunned from a counter communication system. We have what we have and we have some really exquisite capability, but they have a lot more and they can do a lot more jamming. So we have to put the pieces, the kit in the right spots. But we then have to be able to provide that to the other components and the other combat and command so that they then have the information they need to be able to get their mission done.

Lt. Gen. Dave Deptula, USAF (Ret.):

Very good. Now, obviously, one of the most effective ways to secure space superiority is to avoid the fight in the first place. So for all of you, what are your thoughts on how we achieve modern deterrence on orbit, and is there a difference in thinking when we look at the Chinese threat versus the Russian threat?

Gen. Mark D. Kelly:

Well, I heard the word orbit, so I'm magically migrating towards this way. But just to segue off what Doug said, and I mentioned earlier about the ability to put stuff in orbit, is if we the key and P-LEO is the P, if it's proliferated, there's constellations up there now with thousands of [inaudible 00:35:11] and there's constellations that come over roughly every 95 minutes. And if they're providing ISR and they're providing our EW and they're providing our moving target indicator, that is overwhelming to an adversary to try to counter. And so they'll defer the team here.

Gen. James B. Hecker:

Yeah, I think I'll defer to Doug for most of this, but PLEO is definitely the key. Working with industry that are now able to do many more launches than we ever had in the past. To the point where we might be



able to put them on alert to be able to do launches for just in time things should they get one of our satellites we can put [inaudible 00:35:56] as well.

Maj. Gen. Douglas A. Schiess:

So sir, I'll channel my inner CSO and say that we have to be a competitive endurance. We have to make sure that we are always in competition and so that they understand, our adversaries understand that today's not the day to go after one of our assets. We also have to have responsible behaviors in space, and we have to show them that this is how you operate in space. But then we also have to have the capabilities that if they don't do that, that we can defend our assets. And that we can continue to protect the joint war fighters on the ground by taking out their assets if needed. And so are denying their assets.

And so we have to continue to do that. How do we do that again? I look to our Guardsians, I look to our NCOs and our captains and I say, "Hey, what are the ways that we can get to space superiority? How can you do your job better? How can I help you? How can I get out of your way?" But it really is that competitive endurance that every day our adversaries wake up and say, "Today's not the day to take on the Space Force in the space domain."

Lt. Gen. Dave Deptula, USAF (Ret.):

Thanks for that. Now, General Kelly, this one's for you. Could you talk a bit and address the balance between maintaining the force that we're going to have in the next 10 years versus the more advanced capabilities that we have coming online?

Gen. Mark D. Kelly:

Yeah. Anytime you mention a word maintain, frankly, we do what I would say have to have three distinct lines of effort in the maintenance realm. That is maintain what we have now, and that maintenance enterprise from [inaudible 00:37:36] phase to depot is the hardest thing an Air Force does. And old airplanes find new ways to break every day. And so our Airmen, regardless of where they work, need to be steeped in that maintenance and sustainment enterprise. And it's hard, hard work. What we're working with across at least all the platforms that we have.

The other thing I believe we need to maintain is we need to maintain our focus on [inaudible 00:38:06] maintain them on cost and schedule. And then as a nation and as an air force, we need to maintain the focus on a six gen next gen capability because our adversaries are unambiguously focused on him and it's coming. You'll have advanced power, advanced processing, advanced weapons, advanced ability to operate in the EMS, and we have to get there first. And so it is a concerted effort across all of those lines to maintain what we have.

Lt. Gen. Dave Deptula, USAF (Ret.):

A bit of a follow-up. How does CCAs fit into this equation?

Gen. Mark D. Kelly:

Man, I'm a minute and a half away from not getting a question on CCAs.

Lt. Gen. Dave Deptula, USAF (Ret.):

Sorry.



Gen. Mark D. Kelly:

It's okay. So there's obviously a lot written on CCAs. The one thing that I talked to our team at ACC about is not to lose sight of some of what we're trying to do, what challenges we're trying to fix, if you would. And if you look at a Pacific fight, John Wilsbach has to look at every day, and that is we have a non-trivial range problem. And so instead of sending a fighter at the limits of its range or a bomber at the limits of its range getting there, realizing there's not much to sense, not much to shoot, turn around and coming back [inaudible 00:39:34] two-thirds, three-fourths away and have a CCA help solve some of that range problem upfront. That's hugely helpful for endurance and other reasons as it's forward, if you would, the second thing that it helps with is risk. Less chance of a swimmer. If I've got those forward and I keep the crude platforms back, it goes back to a lot of the EMS discussion. I've got to have resilient comms and good precision navigation and timing.

The other part of it is putting CCAs forward besides solving range and risk, there is a sensing bill I have up there. And the more sensors I have forward, the more they contribute. The next thing I would say is really synergy. And synergy gets into back into the desert storm days. As we all referenced earlier, we had a lot of organic kill chains. Whether it be an F-15 searching, locking, identifying, track custody, rules of engagement, weapons deployment, assessing that kill chain. Well now I need CCAs to plug in to where that detect and that ID and that ROE and that track custody and that engagement. And that assessment happens across a web of non-organic, and it's going to come from seven different entities in multiple different domains. They've got to be able to plug into that.

And the last thing, and I won't deep dive it, is the autonomy has to be really, really wired tight and not to be conflated with AI or cognitive AI. Autonomy's not new or controversial. AI's a different topic. But we've got to have the autonomous tasks and roles and things we need to happen locked in really, really solid as they go forward.

Lt. Gen. Dave Deptula, USAF (Ret.):

You're very comfortable with CCAs. I mean, it's a magnificent job. It's unfortunately, ladies and gentlemen, we've come to the end of our panel today. I think after listening to these leaders [inaudible 00:41:33] to have the greatest Airmen and Guardians in the world leading our great department of the Air Force. So please join me in thanking them for their time today.