Virtual CRT: The Future of Army Air and Missile Defense (Transcript)

[Mr. Riki Ellison]
Good afternoon, ladies and gentlemen, from a hot, humid day here in Virginia, Alexandria, Virginia. I'm Riki Ellison. I'm the founder and chairman of the Missile Defense Advocacy Alliance. It's an alliance that we founded 20 years ago, and its sole purpose is to advocate, educate for the deployment and evolution of our missile defenses to make our nation and the world a safer place. We've obviously seen some tremendous capabilities of our warfighters in that mission set this past month. This is our 79th Congressional Roundtable.

It's on the future of Army and Air and Missile Defense. The U.S. Army has been very close to me, and the love of the U.S. Army has come all the way back from 1968, where I grew up with a Sherman tank commander, non-commissioned officer for General Patton, and Fred Letter, another non-commissioned officer, got drafted in Vietnam that went and pulled those 105mm howitzers from hill to hill on it. We, as an organization, have been driven by the Army mission.

We created our Missile Defender of the Year in celebration of the January 18, 1991, first intercept. We've awarded over 1,000 awardees, most of them being Army soldiers. We've been to 793 bases. The majority of those base visits have been Army bases, with Patriots, with THAAD. We were just in Hohenfels, Germany, last Tuesday, watching the maneuver formations and dismounted and mounted counter-UAS. We're in Sembach with the 10th AAMDC.

We met with the 5-7 ADA Battalion for Europe. It's a phenomenal mission, and what the U.S. Army has done with it against Iran last April in their coordination with their capabilities with Israel to defeat Iran was remarkable. Then the showing that happened a week ago in response to Iran over at Qatar Air Base.

We are here now to look at the future, because this missile defense capabilities that we have are not enough. They've never been enough. We don't have the capacity. We don't have the capability. The mission set is so big, and so many bases, and so many things to do with Army air and missile defense mission set. We prospered in the area of CENTCOM, the Middle East, over the past 20, 30 years.

Army missile defense has been designed and has been built to win that fight, and they have won that fight against terrorists, against Iran in that warfare. We have tremendous support from our Middle Eastern allies that subsidize our missiles and our ability to do it, but the world's changed. The world has changed.

Now we're in for a combat fight against a maneuvering force, against a superior force, much more superior than Iran would ever be, the Russians, and potentially the Chinese. We have to change the way we do air and missile defense for specifically the maneuvering force. We have to have capability like we did in the 70s and the 60s and all the way back to World War II, where those combat divisions and the combined arms team at the point of the spear have to capability now, else they're useless.

To be able to take on fiber optic drones, to be able to take on—that whole movement has to be done. We have to relook at that. We have to relook at the combination of offensive fires with defensive fires now. A lot of the same data transfer, a lot of the same technology, a lot of the same radar capabilities of mixing that into the fight, which we have to do now. As you've seen it, we have to go offense and defense together on that. So this is a discussion on how we make our Army missile defense better.

And I think we all know—I think there's only 15, and Dan, you'll get into that, 15 battalions, but out of the 15, there's really only six or seven, and they're operating because they got to rest, recoup, and go forward. And I would say that most of those ones forward are not even fully manned at the capacity they're supposed to be manned. So we've got some big changes that have got to happen. We've got weapon systems that have taken 20 years to come into fruition. The IBCS, which was, I think, 2002, is now finally in operations combat 2023. We've got IFPC that's not even—that's 2014.

We're not fighting the Middle East like we have to fight with Russia. So I think there's a lot here that I'd like to explore with two experts. We've got two of the best, I think, one reflecting the maneuvering force, the combined force, the warfighter force, and another one that is the expert on U.S. Army air and missile defense aspects of it. So that's a discussion we would like to go with and like to flow with it and look at a credible future, because we do know the Golden Dome's coming. We do know that's a part of it. But besides the Golden Dome, you still got to address Army air and missile defense capabilities.

We've got to put funding in that, and we've got to do it right. And whether that mission set hasn't had enough resources, which it hasn't, or there's something wrong with the mission set that's got to change besides getting more resources. Those are the kind of discussions I'd like to top off on that.

But I want to first open up the discussion with Jamie Jarrard. He is a board member here at MDAA, but he's a badass. Jamie, I know you don't like it, but you've had a hell of a career here starting in the armored division in Germany, 5th Ranger Training Battalion, to the 25th Infantry Division. You've been the U.S. Special Ops 7th Division. So you come to this conversation as an experienced warfighter and you're doing this. So I'll pass it over to you, Jamie.

[Lieutenant General (Retired) Jamie Jarrard]
Hey, thanks, Riki. I appreciate it. I'm glad to be here today. I am intimidated a little bit to be on the same conference with Dan. Dan's much smarter than I am. And so I've already asked him not to make me look bad, and hopefully he won't make me look too bad.

But I think it's going to be a good discussion. First, I do want to offer my congratulations and accolades as well to all the air defenders that were out there and doing God's work over the last month. Some great Americans, some great soldiers who train their whole lives and very seldom get to prove their worth.

And yet they were able to do so here over the last month and do so in spades. And so my hat's off to them and some great soldiers there. Riki, as you alluded to, the character of war is changing and it's changing rapidly.

And so at some level, I think we've all got to agree that we've got to change the way that we approach war at this period of time in our history. One of the advantages of the United States military is the fact that we're big. One of the biggest vulnerabilities of the United States military is that we are big and we are bureaucratic and we do not like to change and we can't change quickly.

And that's not a good place to be right now where technology is changing at a rapid, rapid pace. And so how should we be thinking about change? And I think first, we should start off at the higher levels and take a look at the roles and functions of our Army. But I don't think we can do that as we've done it historically. And what I mean by that, and I'm no expert on how things function in Washington, D.C., but what I do know is all the services plan for their new capabilities and their growth or how they want to request a budget independently. And there's very little collaboration.

And so what you get is you get service oriented or service parochial requests and very little discussion amongst the services about who's doing what. And everybody just wants to do what they want to do. And I don't think we can remain effective if we continue down that road.

And that's going to be one of the hardest things to change. But how do we sit down at a table with all the services to include the Space Force, which is a critical part of our future, and identify not only the roles and functions, because everybody can say the Army defends, we defend. Well, we, as you alluded to, and Dan can probably go down in great depth of detail, we don't have the capabilities nor the manpower to defend everywhere that everybody wants us to defend.

And so we need to be more specific than the Army's role is to defend. What exactly is the Army supposed to defend? And what are the other services going to defend? Other services have not necessarily been looked to to provide defense for some of their capabilities. Is that going to change? And regardless of what the answer is, it's got to be agreed to by everybody.

And then that's got to be factored in the budgeting cycle and the budgeting process and DOTMLPF and all the other things that go along with delivering true capabilities, not just a piece of technology. But it's got to be a joint decision. You know, there are numerous examples of tension between the services about what their roles and functions and specific things that they're going to do.

You know, the Aegis to Sword discussion on Guam is one of those. And I don't know that it's solved today. But that's just one example. There are others. But we have to have clarity on who's doing what to whom so that we can then identify the requirements we need in the budgeting process so that we can do what we say we're going to do. Again, all services.

And that's a huge change. One of the areas that we were talking about before we went live is the Golden Dome of America. And that's a great opportunity to create and deliver a joint capability, something that the U.S. military has found very difficult to do in the past. JADC2 is a great example. We've been trying to solve that riddle for over a decade. And we're still a long way from having a solid capability that can perform.

But if we start on this journey correctly with the Golden Dome, we potentially can provide a joint capability that is service agnostic and everybody giving way together to help be a part of a solution that will make the United States a stronger, better, and much more capable of deterring our adversaries from attacking us. And so, that's at the strategic level. At the operational level, and to continue on the Golden Dome thing, one of the things that we've got to solve is the command-and-control network.

And I mentioned JADC2, but we have got to have a network that allows all of the capabilities that we bring, all the technology, all the capabilities that we bring to the fight to be able to collaborate in digits at the speed of war, so that we can understand the battle space. And that's everything that's happening on land, air, sea, space. So, we see what's going on.

And so, we can understand it. And then we can determine what we need to do, whether it's provide defense, provide offense, whatever it is, we've got to have a command-and-control network. And that command-and-control network has got to work for the United States military, but it's also got to incorporate our partners, our allies and partners.

And so, at some level, it's got to have unclassified ability. And we can still do encryption, we can still have in various ways, but trying to solve the classification issue is going to be very difficult with our allies and partners. But we've got to have some type of command control network that allows us to function effectively, no matter where we are in the world, no matter who we're fighting with, and we will almost assuredly not be fighting by ourselves.

And then as we get down to the tactical level, and some of the questions that Riki was pondering earlier, how does the Army think about our future? General C.T. Donahue was talking in an article last week about offensive and defensive fires and potentially combining some of the expertise in those fields. And so, if we got a theater Army commander talking about it, then we should absolutely be thinking deeply about it and trying to think about the future.

And one thing I know about General Donahue is he's all about change. He's more than willing to try new ways, as long as we remain effective at whatever we're doing. But before I left the Pacific with General Flynn, we were thinking about offensive and defensive fires, but there's various levels of that, that it's more nuanced than just saying offensive and defensive.

And we were talking about combining our kinetic, our non-kinetic, our space, our information, you know, our coordination with our other services. How do we bring all of that together at one level so that we do remain optimally effective in no matter what the situation is? And so, I think that it’s potentially a bigger discussion than just offensive and defensive.

We've got to incorporate all of the domains that we're bringing to the fight into this discussion. And the MDTFs continue to add value wherever they are, whether it's Europe or the Pacific. I know that we are, the Army has made the decision to combine those with the two-star leaders in various locations so that it is a multi-domain command as opposed to just a task force.

And I think that's a step in the right direction, especially because they have both offensive and defensive kinetic and non-kinetic capabilities within those formations. And so, I think we're moving in the right direction, but how are we thinking about operationalizing those capabilities with our joint partners so that we're fighting a joint fight and not just a service parochial fight? I think, you know, there are plenty of other questions that we can be asking, but I'll stop there and see if you've got any questions for me, Riki, and then potentially come back after Dan provides his comments.

[Mr. Riki Ellison]
So, Jamie, what about the roles and responsibilities of the U.S. Army's missile defense? They are defending air bases, which is the Air Force's maneuverable force. They have plenty other bases that aren't being defended because they have to use their limited capability to do that.

Is it time—I know we've tried to change it—is it time now to re—unless you're going to get more money, is the Army going to get more money to do this and do all those bases? And then you've got to touch me on the maneuvering force, because that's the stepchild that's been left alone. It is not capable right now of defending against optic fiber drones, all the stuff that's out there that the Russians are using on Ukraine.

Where's the urgency for that? Where's the money for that? And this is separate from Golden Dome. I got Golden Dome, and it's great that we can do a C2 for everybody, and that'll come out of that, and we'll do some capabilities there. But that's not going to answer more capacity for forward operating bases, more capacity for the maneuvering force, more fires. That's not going to answer that, Jamie. So, where's that coming from?

[Lieutenant General (Retired) Jamie Jarrard]
Yeah, thanks, Riki. And back to your first question on services and guarding Air Force bases, I think that it goes back to one of my first points about having a candid conversation at very senior levels in the department about roles and functions and who's doing what. Because, again, the Army cannot do as—we can't do it well right now with the limited capabilities we have, and the capabilities are only growing.

I mean, the requirements are only growing. Previously, and back even 10 years ago, the United States had to worry about really just one strategic threat, and that was probably Russia. And now, you've got China, you've got North Korea, our homeland. And then, with the capabilities that have been demonstrated in Russia by Ukraine and in Iran with Israel, those are not first-world technologies. Anybody can get hold of some of those drone capabilities with kinetic effects on them. And those are going to be prevalent around the world.

And so, our homeland is at risk now. And do we have—we do not have the capabilities, the capacity in our various capabilities to defend everything we need to. And so, we absolutely need to have a candid conversation to determine who is responsible for what.

And then, once we have clearly identified that, that can then generate the requirements for capabilities in our budgeting process. And for the Army, that will help determine what capacities we need in our air and missile defense forces. And we may have problems generating the—through our recruiting.

I think the Army is doing well overall for recruiting right now, but what about specifics in our various MOSs? Do we have the right numbers to be able to fill the capabilities that we're talking about? And then, for the maneuver forces—and I was deficient in covering that in my opening comments, but I think that it is important for us to get better very quickly at protecting our critical assets at the tactical level, whether that's maneuver formations, whether it's our logistics hubs.

You know, in some of our war games out in the Pacific, I think, you know, all—everything we do requires logistics. And so, some of the vulnerabilities we've identified is how we are protecting all of those locations where our logistics are staged. And that is the same no matter if you're at the operational level or at the tactical level.

So, how are we protecting all of those critical capabilities that we need to be effective at the tip of the spear? And I do not think that we are—we have the capabilities we need. And I appreciate Dan's comments on this one.

I do not think we have the capabilities we need. I know that we're working very rapidly with the Army and transform—the transformation initiatives that the current Chief General George has put in place, but I think we've got a lot of ground to make up and that we need to do so quickly. And so, how are we thinking about that?

And do we really have the right folks leading that? And do they have the requisite authority and responsibility to—and resources to solve this problem as quickly as we should be solving it? And so, I don't think we're there yet, Riki, and I think we've got some more work to do.

[Mr. Riki Ellison]
Yeah. Thank you, Jamie. Just one more thing. So, we're probably not going to get too much of an increase, where's the resources going to come from?

So, we all agree that we're going to have to add resources to the Army Air and Missile Defense Mission. Maneuver force, fire and so on, where are they going to come from? Are you going to cut back on something else inside the Army to get it, or are we going to get additional funding on top of the Golden Dome to do this? Where is this resourcing for the Army for this mission coming from?

[Lieutenant General (Retired) Jamie Jarrard]
Yeah, and I'm—you know, I think—so, this is where it gets very hard, but I don't necessarily think we're—you know, in those discussions in the Pentagon, when we're talking about budgeting and prioritization and allocation, I think it's just—it's a discussion about, hey, we're going to pull from the Army to give to another service, or we're going to pull from another service to give to the Army about—and it's about capabilities, but there's not a lot—I don't think that there is a—because it's hard.

It really is hard to truly understand the capacity that we need in various capabilities, and then to be able to prioritize our limited resources towards those. And I don't think that we have standing conversations about who is responsible for what and make sure that that's

clear. And once that's clear, then we can move from there to the capabilities required to do what we just asked the services to do and then determine where the shortfalls are.

And so, it's less about capabilities, although that will be part of it, and it's more about making sure that we have the capacity to do what we're asking the services to do. And so, to your point, I don't know right now where I would recommend. Maybe it is.

Maybe the Army does pull from something we're already doing to solve the problem that you just identified with additional resources for our air missile defense. Or maybe it's, hey, the Army needs something from somebody else, and they can then take a haircut and give the Army some resources so they can. But until we are comfortable that everybody is clear on which service is responsible for what role and what function and at what level that they want them to perform that, then I'm not sure that we're going to make a good decision on allocation of budget resources.

[Mr. Riki Ellison]
Thank you. Thank you, Jamie. Well done. All right. This is one of the all-time, all-time Hall of Fame GOATs for missile defense. I first met Dan probably 20 years ago when he was under the Imperial Brigade down in Texas, but he's done it all.

He's commanded the 94th. He's done the schoolhouse. He's done the highest position, the SMDC commander. He's articulate. He knows missile defense better than anybody else out there. So, it's just, it's awesome to have him on the panel today. It's awesome to give him all these perspectives. I know he's going to answer all of them. And so, with great honor, thank you, Dan, for showing up today and giving us your thoughts.

[Lieutenant General (Retired) Daniel L. Karbler]
Thanks, Riki. I don't know if I'm the GOAT or not. You know, there's two types of GOATs, the Tom Brady GOAT, and then there's the other GOAT.

So, you can figure out which end of the spectrum I fall in on that. Hey, first, so I do want to thank you and recognize you for all the work that you and MDAA does for the missile defense community writ large, and more specifically to the Army soldiers, the Army formations. I mean, over the past 20 years, globally, you have gone out and made it a point to recognize all of our Air and Missile Defenders.

I mean, you know, I have stories that are going out to the most remote radar sites, most remote locations. And hey, sir, Riki Ellison was here and had the rings and gave us some footballs and recognized us. And so, from just the missile defense foxhole, if you will, all the way up to things like Missile Defender of the Year ceremonies, whether it's in D.C. or the ones that you do globally, that's truly a high-five moment for our soldiers, for the organizations, and frankly, our joint partners and our coalition and allied partners, too, as you have brought everybody into the fold. So, I just want to make sure you get the due recognition for the great work that you do for our soldiers and the missile defense enterprise writ large. Well, there's so much to cover here. I'm going to kind of follow Jamie's lead and kind of take it from the strategic level and then down to the tactical, but I'll probably deviate around in there.

The first thing that I want to talk about is the role that missile defense had in classic deterrence. And I want to rewind the tape back to the Israel-Iran and then-Iran attacks into Qatar. I think that we saw a textbook example of classic deterrence.

Now, classic deterrence, people can argue with me all day, but in Carver's simple Wisconsin public education book, classic deterrence has three elements, right? It has deny benefit, impose cost, and have credible strategic messaging. So, you think about President Trump and the strategic messaging that he did.

Iran cannot have nuclear weapons. We know where you are, and we know where your support is. So, think about that for messaging. We know where all your capabilities are. Now, you think about imposed unacceptable cost, and we message and message and message. And then what happens is we dropped all the bunker buster bombs, imposed unacceptable cost.

And then we had denied benefit, which has been shown in spades, not just from what we did in defending Al Udeid, but let's not forget, we have got U.S. soldiers over in Israel defending Israel. And when folks said, well, will there be any U.S. involvement prior to the Iranian strikes? Hey, there has been U.S. involvement for the past two months. Every time Iran targets Israel, they're targeting U.S. soldiers. And we shouldn't lose sight on that. We've had U.S. soldiers targeted for a long time. And that unit out there and those THAAD batteries out there are doing an incredible, incredible job. So, that's kind of the first thing I want to talk about, and how we've seen the role of missile defense, its role in classic deterrence, and how well it has done. We talk about what does missile defense do?

It allows decision makers, it buys decision makers time to make follow-on decisions. And that's what it's done because there hasn't been a whole lot of casualties, some infrastructure damage, but writ large, missile defense has done a good job to give our national decision makers time to then consider options that are out there. So, that's maybe at the strategic level discussion.

One step down. Maybe I'm a little more Pollyannish than you are, Riki, in terms of where's the money coming from? We really have got to tip our hats to when General McConville was the chief and now General George is the chief, and then the Secretary of the Army for putting aside the necessary resources to get air and missile defense back up on its feet.

So, when you think about the number of maneuver short battalions that we're standing up to include equipment, to include soldiers, the number of IFPIC battalions that we're standing up, equipment and soldiers, the patriot battalions, additional patriot battalions that we are standing up, interceptors that we're purchasing, that money is coming from somewhere. And so, somebody is making the decision to provide the resources to the top priority, or at least in Carver's book, the top priority of resourcing our air and missile defense. Now, it doesn't happen at a snap of the fingers.

We have got to allow all of the capabilities, the DOTMLPF pieces that are all part of capability development, we have got to allow them to coalesce and come together. We have got to allow all of the capabilities, the DOTMLPF pieces that are all part of capability development, we have got to allow them to coalesce and come together. And it doesn't

happen overnight. We would love for it to, but you've got to grow soldiers, you've got to grow leaders, you've got to procure the equipment, you've got to build the equipment, test it, field it. It takes a long time to do that. But we're getting after it. The air defense branch is getting after it.

I mean, you have to build out the schoolhouse. You have enough instructors, classroom space, et cetera, to get the soldiers in and get them through the pipeline so that they can go out trained and ready to go to their first assignments. The cautionary part of this, and I think Charlie Flynn might have talked about this back when he was with you, is when the Army made the decision to get rid of Maneuver SHORAD, it did it very short-sightedly. And I can remember when I was up in the G8 working at then FDE, briefing a two-star who shall go unnamed, who said, you air defenders want to—because we were briefing them on the UAVs. Now, this is 20 years ago. We were briefing them on the UAV threat and how it was going to become the poor man's Air Force.

We used to have a slide about what $50 million could buy you. And it could buy you a whole lot of UAVs, not many fighter aircraft, a few more attack helicopters, a few more ballistic missiles, but it could buy you a whole lot of UAVs. And we said, hey, we need to be able to defend against these UAVs. They're going to become a problem. And this two-star said, you effing air defenders are going to want to sting your gunner on every street corner. And he basically disapproved, threw us out, and we lost all of our Maneuver SHORAD battalions.

Now, the Army made that decision because we had modularity, we were trying to increase force structure, but it was pretty short-sighted. And that decision was enacted within about 12 months. We lost all of our Maneuver battalions in 12 months. Think about now how long it takes to get that capability back. And now I'm not just talking about the capability to assess soldiers, though thank God Air Defense is doing a pretty good job of assessing new soldiers and officers coming in. And it's not just about getting the money out there and starting to build out the equipment sets and starting to field the equipment, doing the new equipment fielding, new equipment training, but it's the lost art of how Army Air Defense supports the Maneuver force.

And that's both from the Air Defense side, but as Jamie could probably attest to, it's also from the Maneuver side and having those Maneuver commanders. Now, I don't know how you look at generations, but if I were to go Colonel, Lieutenant Colonel, Major, Captain, Lieutenant, Sergeant Major, First Sergeant, Sergeant First Class, Staff Sergeant, down to Sergeant and Specialist below, there are multiple generations of soldiers who have no idea how Air Defense supports the Maneuver forces. And again, that's not just from the Air Defense side, but that's from the Maneuver side too. We lost the art. We're trying to build it back up again now in CTCs and MCTP, and we're getting better at it. But when we got rid of our Divisional SHORAD units, we lost the art of Maneuver, of Air Defense being able to protect the Maneuver forces. We're gaining it back. But again, that takes time. So the cautionary tale is when the Army is looking at divesting itself of a capability, it really needs to look hard at the second and third order consequences.

And sometimes it's just, we need to cut this, we need to divest this capability because we can't afford it, or we need to reallocate resources to some other mission. And that's just dangerous, especially if you're very short-sighted about what the threats are that are on the

horizon. And we're not wanting to say, I told you so, but it's kind of, I told you so. And frankly, it's a little frustrating when you have the right answer and you throw it out there and then the senior leaders kibosh it and basically toss you out of the office. So that's a little bit a piece on the Maneuver force. Here's another part of the Maneuver force though too that, and again, Jamie and the follow on, you certainly can address it or help me out or tell me that I'm wrong.

Not every infantry battalion or infantry company or armor company, or you name your maneuver element gets an air defense force attached to it. And I'll use this as an example. So if a Maneuver battalion is out there, they don't get a engineer battalion to lay in their concertina or dig their foxholes. I'm pretty sure that soldiers lay triple strand will dig their foxholes and improve their battle positions without the help of an engineer company. I think that all batteries or companies out there have to put out their own inmate alarms. They don't get to have a chemical company out there and place their chemical detection equipment.

We have to start looking at Air Defense in the same way. The Maneuver elements and other elements are going to have to get trained and proficient on counter UAS technology, have a training and certification program, and then sustain and maintain that certification program because you're not going to get enough air defenders everywhere. It goes back to your point. We can't get enough air defenders everywhere. So other folks are going to have to pick up that mission. Back in the late 80s, we had non-dedicated Stinger teams. I remember even in my Patriot battery, we had our vehicle mechanics, we had cooks, we had supply folks. We sent them up in the northern part of Germany, the name escapes me now, Totendorf, I think it was Totendorf, and they would do Stinger live fires. And that was a huge high-five moment for them because they got to shoot Stingers, they weren't even air defenders, but they were dedicated Stinger gunners.

We have to go back to that model in order to be able to provide the Maneuver forces with enough air missile defense capabilities that organically they're going to have to solve themselves because we don't have enough force structure within air defense to cover down to all those individual tactical elements. Along those lines, let me talk a little bit about ground-based air defense and the Air Force's request for ground-based air defense capabilities. First, I would really challenge the Air Force to tell me where their top priority air bases are not defended right now, because they are defended, we saw that now indeed.

But the Air Force is going to have to look at doing it, be self-sufficient, and provide its own counter-UAS capabilities. I don't know, you know, if the Air Force wants to go into the ground-based air defense role, I think some tough questions should be asked to the Air Force. How much TOWA and force structure are you going to put towards that?

And if you're going to pull force structure and your own TOWA out of other places to provide your own organic ground-based air defense, why not just shift all that over to the Army? We have the schoolhouse, we have the expertise, we have the capabilities to be able to do that. And we will continue doing it for the Air Force. We haven't shown any reason not to. Also, a hard question which should be asked of the Air Force is, where are those ground-based air defense airmen? Where are they going to rack and stack in the whole scheme of Air Force promotions or Air Force advancements? Let's not forget the history lesson of why

was the Space Force stood up? Because Congress saw that the promotion rates for those Air Force officers with space specialties was not keeping pace with pilots. Stand up a Space Force because the Air Force wasn't promoting space experts at the same rate as the pilots.

So is the Air Force going to put a guarantee out there that the GBAD airmen would get promoted at the same rate as pilots? Probably a little controversial there, but it certainly is worth having that discussion. The other thing that I want to talk about a little bit about GBAD and the Air Force's request for agile combat employment, the ACE concept. And hey, we're going to need air defense out there to cover our agile combat employment. So again, it begs a couple of questions. First, I would really like to see the CONOPS for agile combat employment. How long on the ground are you going to stay before your agility kicks in and you're going to move out of there? Is it going to be so long that you're going to be there and you're going to be targetable? And so you need to have Army air defense there to protect you.

And then the Chinese, the Russian, or whatever the adversary is going to target that air agile, where you're there, you get your mission done, and then you take off before the targeteers can get a cross airline you and put a fire mission on you. And I don't know. And maybe you need to have some air defense capability there for 24 hours to drive down the risk. And that's something that we would look at. But I think that in the agile combat employment CONOPS as it ties with ground-based air defense, those two things need to come together so we can better understand it as a joint force. What are the needs? What are the requirements going to be? And can they be done by the Air Force or are they going to need service support? Here's the last one that I'll touch on.

Again, maybe a little Pollyannish, but we actually have some jointness successes out there. And they're not hugely broadcast and not widely known. But I would tell you, when you look at C2BMC and IBCS, we've got some joint capabilities that have been demonstrated in both of those. First, C2BMC has been around a long time. That's the backbone for all of our missile defense. And when you can snap link in Aegis BMD, a bunch of disparate sensors around the world, with our folks up at Fort Grelyer, California, with C2 into, you name your COCOM, as well as into Colorado Springs, where the 100th GMD is at, there's a lot of jointness in there. And we're able to, based on shot doctrinal training, we're able to leverage all the different joint capabilities out there underneath the C2BMC architecture. So I'm actually, I think we have the capability. I think that as C2BMC comes, it's been around for a while.

I think that Golden Dome can leverage and take advantage of the C2BMC backbone. We don't have to reinvent something. And then the Army's IBCS. We have fired, we have, off of IBCS, an F-35 has taken a shot off of the IBCS network with a Patriot radar feed. So the capabilities are there. We just need to exercise and practice it and, you know, get it out to the field more often and out of the test environment, and instead just start using it with our forces that are deployed. And then I think the last thing, too, is I've just got to take a, again, a hat tip to all the 32nd AAMDC elements that are in CENTCOM for what they have done. But also let's not forget that the Indo-Pacific, they also provided capabilities that went into CENTCOM. And so you don't do that without well-trained, qualified, and certified crews.

So that's what I got for you there, Riki. Thanks again for the opportunity to talk.

[Mr. Riki Ellison]
You are the GOAT, buddy. You're Aaron Rodgers of Green Bay Packers right now. You're rolling.

Let me go back to you because it's the speed and urgency of combat that's driving everything. And I understand, be patient, wait until, but we don't have that time. How do you speed this up in combat? I mean, you've seen Ukraine tested how fast evolving their combat is to catch up to it. We can't just sit and wait. I don't think we can sit and wait until everything matures. We have to have some sort of urgency getting this stuff to the warfighter. It's like Patton coming over to North Africa and getting his butt kicked that first couple of bouts. They figured out how to fight this.

We got to be able to fight this much faster than we are. So just that. And then you didn't talk about fires integration. Is that a good thing? Because I know you've, the schoolhouse, you've sort of done that, tried to do it. Is it make it more efficient for everybody to combine both those or not? And why not that aspect of it on it? And I still, you know, great on the air bases, but there's a lot of logistics, a lot of weapons. There's a lot of stuff that's not defended, that should be defended, that needs to be defended on it.

And so there's a roles responsibility flicks between the Air Force and, and I understand your point, but we've got maneuvering force to handle, fires to handle. We've got forward operating bases and we've got the Golden Dome, but there's a lot there. Just take a shot.

I know Jamie wants to ask you a couple of questions, but go ahead on any of those would be fine.

[Lieutenant General (Retired) Daniel L. Karbler]
We're not waiting. I mean, look at DEM show red. As soon as those four prototypes rolled out there, where'd they go? We sent them to CEPCOM. You know, Corella wanted them. We sent them out there. They were prototypes. They weren't a hundred percent ready for prime time, but we weren't waiting. COCOM wanted them. We got them out there. You know, other capabilities that the COCOM asked for, we're not waiting. We're getting them out there. It's just, it's not like we're waiting. We're just, we're subject to the laws of physics, the budgets, the industrial base capacity capability, but we're not waiting. A good example, we're not waiting. You know, how many interceptors have been fired out in the Middle East?

We're not waiting for more interceptors. They're getting turned over pretty quickly and getting fielded and put on launches pretty darn quickly. And so, so I would say we're not waiting, but we are subject to just some of the realities that are, that are out in the world. Offensive defensive integration, they're, you know, I, I'm going to sound very, very, this is going to be, you know, different than probably what Jamie or others are looking at, but right now we have so much specialization in our weapons systems, whether it's field artillery or whether it's air defense, that the integration of leadership or the integration of those capabilities probably doesn't happen until you're a major or lieutenant colonel, whether it's your staff, but I will tell you that COCOMs are looking for expertise in those areas. If I'm an

air defender and I've been doing air defense for 10 or 15 years, or even five years, I've got a couple of deployments under my belt and I'm going to try to shift over to do an FAA job, that's going to be very hard, vice versa with FAA. Or if we just say, you're just the fires branch and you're going to be everything to everyone, offensive and defensive.

I've been a commandant. I've been a TRADOC. There's no POI in the world that's going to cover the entire waterfront needed to make a lieutenant or a sergeant or a soldier proficient in every task that's going to be needed to be done by a fires NCO or fire soldier or a fires officer. There has got to be separate branches to perform their branch specific missions. That doesn't mean that in the planning side, we don't do planning and we don't make sure that, hey, wherever that TAL launch from air defense, you saw where it came from, counter battery that sucker with a hypersonic or whatever that we had to counter battery it, that kind of stuff happens already. Jamie can probably attest to this better than me because he was up at USARPAC, but when you look, when you go to all the COCOMs and you look at the joint fires element within those COCOMs, that colonel that runs the JFE within the J3 is the busiest colonel on the staff because they have to take into account targeting, intel, kinetic, non-kinetic, all domains, whether it's cyber, STRATCOM, conventional missiles, conventional or special ops, direct action teams, whatever the effect is that they can get on target, that JFE coordinator is really the synergy behind bringing all these different disparate elements in.

And so, again, maybe a little Pollyannish, but we have some of the jointness figured out. And now I've filibustered long enough, I forgot what your third question was, but that was by design, unless Jamie has something to add.

[Mr. Riki Ellison]
All right, Jamie, you got a couple questions for Dan?

[Lieutenant General (Retired) Jamie Jarrard]
I do. And Dan, thanks for all of your comments.

The one thing that I'm trying to think about is the lessons that we're learning from Ukraine and Russia and a little bit of Iran and Israel, although it's really more about Ukraine and Russia. And so how, with the speed of change on those battlefields and the capabilities that are prevalent at the tip of the spear and the defensive capabilities that they're having to use with the mass of ordnance that Russia is throwing at them, what lessons is our ADA community, our air and missile defense community, taking away from them and then raising up to senior levels in our Army saying, hey, these are some areas where we have got to change and we have got to improve because we're not ready?

[Lieutenant General (Retired) Daniel L. Karbler]
So I know Curt King out of the 10th Army Air and Missile Defense Command. He's got his guys and gals everywhere collecting lessons learned. They share them back with the ADA schoolhouse. And I know that that propagates throughout all TRADOC, Center for Army Lessons Learned, et cetera.

It's the speed at innovation that's happening. And you've heard Jim Rainey talk about soldiers, the closer they are to the sound of gunfire, the quicker you are to innovate. And that's what they're seeing out in Ukraine, especially with air defense.

I think the other piece to remember, too, is it's not all just active defense. You've got to have passive defense. You've got to have cover and concealment and camouflage and dispersion and hardening and take all those measures, too, because you don't have enough air defense. So, what are those other pieces as part of integrated air and missile defense that you've got to be able to do?

I think Ukraine is doing a masterful job of attack ops, sending those drones in to take care of the bombers, take care of delivery platforms. The best time to hit a missile is when it's still on the ground or still on the pylon of an airplane while it's still on the runway. And we've seen Ukraine do that. So oftentimes, we always just think of air missile defense, integrated air missile defense as just the active defense piece, but there's passive defense attack ops that go along with that.

[Lieutenant General (Retired) Jamie Jarrard]
Yeah. And so are you satisfied that the capabilities we're developing for our air defense community are being developed at a pace that is going to be relevant for the future? I mean, again, I'm all about great solutions for capabilities that we need.

I'm nervous that those capabilities are going to arrive late to need, and they're not going to be compatible with other systems on the battlefield that we are going to need them to talk to, communicate with, so that when we do identify a threat, we can identify the right system to defeat that threat in seconds, and not minutes and hours. And so that's what I'm worried about, is our lack of innovation in some of those areas is going to prevent us from being relevant on future battlefields. Your thoughts?

[Lieutenant General (Retired) Daniel L. Karbler]
Yeah. So with an eye on integration and not building proprietary software, allowing contractors to develop proprietary software, we learned that lesson with Patriot, right? Proprietary paddle, right? Patriot data links, not a joint data link. So we learned that lesson. And that's why when we've developed IBCS, it's open architecture, probably overused term, but it is plug-and-flight capability. So now whenever a new capability is being developed, it knows that it has to fit into the IBCS architecture.

My personal story is, my daughter just took the IFPC battery at JBLM. She's building IFPC equipment right now. Well, guess what else she and her soldiers have to learn? IBCS, because it's not a separate IFPC talk. It's the IBCS EOC that they're operating out of.

So it's not like you had a Patriot C2 and you had Maneuver SHORAD C2 and all these other C2s. You have IBCS. And then what we've done is we've got Smart and we've been able to incorporate FAAD C2 into IBCS almost seamlessly in order to be able to take advantage of FAAD C2. And then the IBCS launchers that'll come in, the Sentinel radars that'll come in are all compatible with IBCS and an IBCS backbone. Is it coming fast enough, Jamie? Heck no. No.

[Lieutenant General (Retired) Jamie Jarrard]
No. And I mean, you're much more deep on IBCS than I am. But I mean, I think there's still, you know, the fact that we, I mean, I don't know that it interfaces with AEGIS, ground-based AEGIS as well as it should, or any AEGIS in general. And so, there's still service equities that are—when we build equipment and field capabilities, there's no joint requirement for all of those capabilities to talk to each other. And we've got to crack that as we move into the future. We just cannot have proprietary equipment or even service equipment as we look to solve the future problems on the battlefield.

I absolutely agree with your comment earlier about the capabilities and the training that needs to be evident in all of the maneuver formations so that we can defend our own wherever we do not have, wherever it's not a—it doesn't rise to the level of prioritization where we have to have a technical air defense capability to protect us. We've got to be able to do that anywhere on the battlefield. And, but that goes back to the systems that we, and capabilities that we need to field ubiquitously so that we can defend ourselves, not just those high-end, high-end level stuff. Are there any lessons from Iran or Israel that you can think of here over the last month that we need to be incorporating as we think about our future capabilities?

[Lieutenant General (Retired) Daniel L. Karbler]
And this is going to sound counter to maybe the current discussion, but we actually can go ahead and just go toe-to-toe, missile-to-missile with them for a while. And, you know, too often we're like, oh, we can't go missile-to-missile for them. Well, you don't have many other options. So you might as well just, you know, intercept the incoming missiles as they come, reload, and continue intercepting them until attack ops is sufficient enough to either destroy all their TELs, keep them in their hide sites or in their tunnels so that they become ineffective, or take out their C2. You know, we know that Iran has thousands of ballistic missiles. The fact that, you know, they're mounting just small attacks tells me that our attack ops has been pretty effective. So we have enough air defense capability to be able to, you know, take care of any of the incoming raids. But again, that's where it's all integrated air missile defense is about the attack ops, the passive defense, as well as the active defense piece. And then maybe the last part too that's not talked about enough is the resiliency of the Ukrainian people and the Israeli people.

I mean, I don't know how, you know, I'd like to think that Americans, if they started getting shelled, that they would, you know, come together and build, you know, go to their bunkers or go to fallout shelters, et cetera, and then try to continue on with life. I would like to think that we're as resilient as the Ukrainians and the Israelis, but there are some lessons learned from the people side and kind of the mental aspect of this that probably merit taking a look at.

[Lieutenant General (Retired) Jamie Jarrard]
I would absolutely agree.

[Mr. Riki Ellison]
So Dan, just from this conversation, you think we're all good, we don't need to change much at all with the army or missile defense we've got. I just don't think that's true. The world's changing, the war fighters got to have capacity. They don't have it. I know it works maybe in

CENTCOM, but I don't see this in a good spot right now in the other areas of the world. But you think we're good. You think we're all good. We can just wait until all the stuff holds out and comes. There's no urgency.

[Lieutenant General (Retired) Daniel L. Karbler]
There's not much a sense of urgency. I think you're conflating what I'm saying when I'm saying it takes time to get stuff out, you know, to get stuff out the end of the factory assembly line.

[Mr. Riki Ellison]
How do we speed that up? How do you speed that up?

[Lieutenant General (Retired) Daniel L. Karbler]
You have to ask the acquisition community that and the industrial-based folks and find out if they can retool. Probably more—I don't know if more money would help. I mean, you look at all the challenges the industrial base has right now with workers, skilled workers, material. I'm not buying supply chain anymore because, you know, COVID is a long time over. But some of the sub-vendors, finding sub-vendors to provide some of the sub-components that go into our major end items, that's very hard business. It just doesn't happen overnight. And are we happy about it? No. Are we satisfied or complacent? No, we're moving out as best we can. I mean, Frank Lozano can tell, he can talk all day long about how he's trying to squeeze out every efficiency, shorten timelines, shorten critical paths to equipment manufacturing. And I know that the industrial base is out there lockstep. They know that they can't afford to take a vacation or pump the brakes on churning out this critical equipment that the Air Defense Branch needs.

[Mr. Riki Ellison]
And, Dan, and the TTP, the development of the fighter, of the air defender, can we speed that up? And the innovation, the stuff that's not the technical stuff, but the human part of this thing and increased capacity was sold. I mean, don't we have dwell time issues? Don't we have issues with not enough soldiers in the Air Defense Branch?

[Lieutenant General (Retired) Daniel L. Karbler]
Well, we're assessing new ones. I mean, we are meeting our sessions goals for new recruits coming into Air Defense. Our officer sessions are higher than they've ever been. So the Army has opened up the aptitude there. To get them to the schoolhouse, you need more instructors. You need more classrooms. You need more than 24 hours a day. When I was a combat, we actually ran 24-hour training ops. We had three eight-hour cycles of instructors. So you had students going to class eight hours from, if I remember right, it was from 0800 to 1600. It was from 1600 to 04, or 1600 to midnight, then midnight to 8 in the morning, around the clock. Now, what does that take?

It takes more instructors. It also takes equipment, more equipment, because that equipment's being used 24 hours a day, and you've got to go and maintain it and take it offline to maintain it. So we've done it before, but you need to get the resources in there. TRADOC and the Army have got to continue to feed those resources into the Air Defense pipeline, which they are. And sometimes we contract out for our instructors there at Fort Sill, but it just becomes a matter of getting there faster and faster. One thing I would not

advocate for, though, is shortening the timeline for training. We've already done that. It used to be to train a Patriot operator was around 40 weeks or so. We've crushed that into 19 weeks. We have that. And then we put a lot of the burden on the operational unit. So now the operational unit assumes all that risk of a soldier.

And we take some things out, like missile reload. We took out of the POI at the schoolhouse. We just basically said, operational units, you're going to have to go teach missile reload to the soldiers. But we've identified all the critical tasks that a soldier or officer need to have before they go to their first unit, and we've left them in there. We've gotten rid of all the chaff and everything else, and it's left us at about a 19-week training program. You cut any further than that, Riki, and you're going to run risk of having untrained, unready people go into your formations, which then puts the operational risk on the field.

[Mr. Riki Ellison]
And then you didn't even discuss the maneuvering part of that. And that's a whole new, as you said, bringing that back into four and the threats that they're seeing that are evolved. But I don't want to take up any more of your time. We're a little over, but I want to make sure Jamie can answer some questions, maybe two or three real quick from the audience or from you, Jamie, before we close this up.

[Lieutenant General (Retired) Jamie Jarrard]
Yeah, I guess just, and I mean, we've spent a lot of time talking about it, Dan, and I'm not trying to be nuanced there, but I guess my question is, and I'll try to help formulate the answer as well, but if we had to go to fight today against Russia or China, does our current organizational structure and the capacity we have, is it enough?

And I think you answered that a little bit, but I'll give you an opportunity to answer it one more time. But I think earlier you said, yeah, the Army and the secretary, previous secretary and the previous chief made some decisions with force structure and capabilities. And once we realize those, we'll be in a pretty good place, or do you think that's enough? So currently, are we good? And then once we get all that planned increase, will that be enough?

[Lieutenant General (Retired) Daniel L. Karbler]
If a balloon went up tonight, we don't have enough. Now, again, integrated missile defense is a whole bunch of stuff. If we had a policy of preemptive strikes into Russia, and we just go in there and start mowing them down before they could get anything off the runway, off the TEL, or out of a silo, then maybe we would have enough. You know, again, so instead of it just being the active defense toggle up, the attack-off toggle goes way up there, and we go there and just decimate Russian offensive capabilities. Then we might have enough.

[Lieutenant General (Retired) Jamie Jarrard]
Yeah. Last question from me, then, is how does the Space Force and, you know, how are we thinking about them, and how are we, how would you incorporate them into the air missile defense, if you would, at all?

[Lieutenant General (Retired) Daniel L. Karbler]
Yeah, so they're already well-integrated in terms of all of our space early warning, all of our missile early warning capabilities. Much of our SATCOM that provides, you know, global

communications for C2BMC is there, our GPS, North Finding System equipment within our air defense weapon systems, obviously those are on-orbit capabilities. So, they're already well-integrated to what we do from an air missile defense standpoint. The air defense branch in the Army, if you remember, we passed our JTAGS, right, our Joint Tactical Ground Stations that provide the direct-to-theater early warning. We gave that to the Space Force. They're probably in a little better posture to handle that mission. And so, yeah, so I would say we're pretty good.

Now, if you want to talk about space-based interceptors and some of the future capabilities, that's a little ways down the road. And then the last thing is the HBTSS, right, the Hypersonic Missile Tracking System that we have, been tested, does an excellent job of the constellation that we have to be able to track hypersonic weapons. And again, that's part of the overall air missile defense architecture for that early warning tracking and fire control quality tracking solutions down to the shooters from space.

[Lieutenant General (Retired) Jamie Jarrard]
Yeah, thanks.

[Mr. Riki Ellison]
Jamie, you got any, just one more question out there, and then we'll wrap it up.

[Lieutenant General (Retired) Jamie Jarrard]
Yeah, I will. How is directed energy capabilities, how are the directed energy capabilities that we're thinking about, how is that going to impact all the discussion that we've had? Are we moving with alacrity toward finding those solutions as well and getting that to the warfighter and maneuver formations?

[Lieutenant General (Retired) Daniel L. Karbler]
As I mentioned, so we sent out the four DE M-SHORAD prototypes, General Kurilla wanted them, we sent them out there. They're just not ready for primetime hardening-wise, sustainment-wise, very difficult. DE is not a good weapon in dust because of the laser weapon system and the performance of the laser. But it is a capability we've demonstrated. For many, many years, shoot for 25 years, we've proven lasers can shoot down Katyusha rockets and other aerial threats. I mean, lasers are great on shooting down drones.

I think it's just a matter of being able to ruggedize it enough, getting enough supply tail to support the capabilities. But when it comes out at the other end, you know, it's the cost per shot is greatly reduced, the tail per shot is greatly reduced. We just have got to, like I said, we've got to ruggedize this thing and get the supply channels up for us. You know, the laser, the reflector on the lasers, you know, those are handmade. The optics are handmade. So, you don't exactly have those being spit out along the assembly line. So, we've got to figure out how we solve that too.

[Lieutenant General (Retired) Jamie Jarrard]
All right. Back to you.

[Mr. Riki Ellison]

Okay, I think we just wrap it up real quick on what your final thoughts are, what the future of Army Air and Missile Defense is going to be. Well, Dan, you got this whole thing. So, what's your thoughts as we look into the future for our branch, or the branch?

[Lieutenant General (Retired) Daniel L. Karbler]
Right. It's growing. It's not growing fast enough. And I got to give General Caine some great props for recognizing our Army Air Defenders out there. It was a, you know, hand over your heart moment if you're an Army Air Defender, listening to the Chairman of the Joint Chiefs talk at the tactical level about the Air Defense contributions to the last fight. So, I think the future is bright. It just can't come fast enough.

[Mr. Riki Ellison]
Okay. Dan, thank you for your time and your explanations today. It was very well received. Thank you. Jamie?

[Lieutenant General (Retired) Jamie Jarrard]
Yeah. Thanks, Riki. And Dan, thank you. And again, I think it's clear, you're much more dominant on this topic than I am. But I do, I am worried that with the changes on the, that the changes with the character of war, as we are witnessing around the world, that we have got to be more innovative in how we approach some of the solutions to the problems that we see elsewhere. And we can't keep doing things the same way we've always done them.

And I'm not saying that that was where we headed the discussion today. I just think that we have got to be open with the technological advancements that we're trying to make and look at every single available technology out there, and no matter who's developing it, and try to get it to the warfighter so we can experiment with it, we can innovate with it, and we can continue to get better every single day, every single month, every single year, because this technology is going to continue to change and throw problems at us. Once we solve problem A, then we'll have problem B. Thanks, Riki.

[Mr. Riki Ellison]
Thanks, Jamie. Thanks. Thanks, Dan. I think, again, we're in one of the most historic changes for air and missile defense, and Golden Dome is the forcer. Golden Dome is three years, they're going to spend $175 billion to get data, move quicker, jointly, all domain. And we've got to leverage that, that speed and what they're going to develop and apply it to Army air defense for sure. But we have to be much more aggressive in getting our resources, more resources, more capability and capacity, especially for our maneuvering force. And we got to relook at that issue. Dan, you pointed out correctly, we got to relook at the base issue and some of the roles and responsibilities to get this thing set and moving.

You have momentum, you have energy, you have Congress, you have the President, you have everything here to support the Army air missile defense mission. We've got to take advantage of it. We've got to leverage it and break through and try the innovation and not sit back on our heels and wait. We can't do that anymore. We've got to be out front. So I'm excited about it. I'm excited for the 20 years that you've put in there to get to where we're at today. But now it's a jumping point, and we've got to take advantage of it. So, great discussion.

Thank you, everyone, for participating.