

Virtual CRT: Deterrence at the Edge: Innovation and Acquisition on the Eastern Flank Deterrence Line

[Riki Ellison]

Good morning, ladies and gentlemen, from a wet, cold Eugene, Oregon, at the University of Oregon, of all places, this morning on our 88th virtual that we're bringing to you. Had a wonderful week last week. I was in both Poland and Germany at the ranges, being out front at the tactical edge with this.

I'm Riki Ellison, I'm the founder and chairman of the Missile Defense Advocacy Alliance. We've been doing advocacy for missile defense since 1980, a long time, and we have been very, very active over the last couple of years with our sole mission and belief in having, developing, deploying missile defenses in making our world and our nation a safer place. That's our mission, that's what we're doing.

We've had the opportunity to be, in the last two weeks, two to three weeks, we've been in Guam, we've been in Tokyo, we've been in Huntsville, Alabama, we've been in Europe, right at the forefront of the fight. I think we step back, I just want to step back for the European position and look at what's happened. And I think there are two major things that have happened.

The first is our ability as a NATO alliance to deter Russia. And that deterrence in today's world is to be able to defeat mass of their drones and mass of cheap weapons that are coming and being displayed in Ukraine. The Russian average example of firing 800, 900 Shaheds and ballistic missiles combo every night in Ukraine, that's the only place in the world that can defend against that, that learned how to do that.

We haven't done that yet. We haven't got a deployed system out today anywhere in Europe to be able to defend that kind of mass.

And it's from our General, from the LANDEURO, General CD Donahue, who absolutely believes that you have to defend mass first on your maneuvering forces to be able to enable overwhelming violence on the backside. And that is the deterrent. So that is a big movement on why we're doing what we're doing across the nine nations on the Eastern flank to create a mass capability and innovation to do it cheaply underneath the cost of what is costing Russia to do.

I think the second thing that's happened is the deliberate, you can say deliberate, I'm going to say deliberate Russian drone incursion on Poland a month or two ago and on Romania. And both these nations not having the ability to shoot those down with a cheap weapon. Certainly they shot a couple down with a very expensive weapon.

But those two things have forced a movement in our country and in NATO. And I want to give a lot of credit to Tom Goffus, who's here tonight with us, on his vision, on when he first

got here two or three years ago, on creating an IAMD capability, true IAMD capability in Europe. We were together, Mark was with us too, I believe. We were together in London in conferences. We were together in May this year in Poland. Putting forward the concept of Eastern Flank Deterrence Line.

That was put in forward. It has gained momentum. It was announced again at the LANDEURO Conference.

It's tracking and we're seeing the very first elements of it today or last week. Last week in two different training areas that I was able to go. Chris was with me on both those training areas.

One in Nowa Deba, I'll get that wrong, in Poland and the other one in Putlos in the Baltic Sea in Germany. Both of them are putting together an actual layered portion of the Eastern Flank Deterrence Line with sensor capability and with shooter capability that has depth. And we're starting with that aspect of it.

I think it's really interesting from my perspective was taking a look at the MEROPS system in Poland last week, last Tuesday, which is a Surveyor drone. It's drone on drone. And it's a drone that's probably costs 5K to 8K.

So that was demonstrated. Using our RPS—you'll clean me up, Chris—42 sensors that are on our stout striker, taking them off the striker and putting them down and putting the surveyor and launching it off a Ford pickup truck, it's badass, and shooting it up. And it's been able to get close enough for proximity explosive to be able to take out drones on the cheap.

So if you're looking at an \$80,000, which these Shaheds are, 80 grand, you're able now for the first time to be able to put a cheap effector in the game. And those effectors that we're talking about are not just a test site thing. They have been loaned by us to Poland and to Romania.

So they now have cheap land-based counter-UAS to defeat the Russian drones, as we saw that flew over two months ago. So there is capability there now, finally for that. But this has been a great movement on speed to be able to do that aspect of it.

So that has got to be scaled up, right? That's got to be scaled up. And that's one of many others that are going to be coming in to be able to do it.

But then on Thursday, I got a chance to get in there before the Friday DV day over in Putlos, where they brought in, I guess they had over 270 applicants for prize cash to be able to do counter-UAS. And they brought innovation right to the front and they down selected to 12. And then they awarded 5 to do that.

But that movement there was putting those capabilities of forcing venture capital, forcing business to get that out in front of that and being able to display that and then being able to put that back in to a shared data—which is going to happen—a data plane. I think Tom,

you're aware of this. Instead of using Galata, we're using global open architecture transformation.

And I think that is being built now to be able to bring everybody in the game here on top of that. It is vitally important that our NATO partners contribute. They are, this is their place to being part of this innovation at the tactical front end of it.

So there is some greatness happening here. We're started, we've got roots in the ground. We're moving forward.

So I'm going to let Chris explain what we kind of did out there and where we're going and why we're doing this. So ladies and gentlemen, Colonel Chris Hill. Chris.

[COL Christopher Hill]

Hey, Riki, really appreciate it. And thanks for having me back. I guess I didn't say anything too crazy on the last one, you know, getting a second invitation, but you know, I tell you, I actually on the 21st of this month just hit 30 years in uniform.

And I started out as an enlisted soldier, you know, I got commissioned later on, but it just dawned on me this morning that I've actually been wearing the uniform of the United States Army for 30 years of my life. And I will tell you in all my years, I'm not sure I've done anything more exciting than what I've been blessed to do right now. On one hand, we talked last week about the work that we're doing from an IBCS perspective, large program, billions of dollars, program that while we're starting to move faster, it still takes time, it's a huge program of record.

And about 90 days ago, I was approached by senior leaders with the opportunity to lead a new organization and to challenge all assumptions. The only guidance I was given was challenge all assumptions, challenge any type of bureaucracy that slows down the process. I want you to go to Germany, I want you to meet with General Donahue, figure out what his problem set is, figure out an answer for it, put a team together and get after it.

That was it, that was all the guidance I was given. I loved it. So fast forward 90 days and we've set up the Global Tactical Edge Acquisition Directorate or GTEAD.

You mentioned Cody earlier, I was able to hand select a team of about eight majors, actually six majors and two civilians. Cody is going to be the lead, the full-time lead as we move into the summer for GTEAD, Major Cody Lucas. But the bottom line is this, it started, this all started with the President of the United States down through Secretary of War, down through the Secretary of the Army that had five very distinct pillars of how do we transform acquisition.

The first one was to rebuild the industrial base, number one. Number two, elevate and empower the acquisition workforce to rapidly deliver and to give them maximum flexibility. Then reduce regulations and process.

Then it was develop high-performance systems and the last one was improve life cycle management. You talk at that huge strategic level, but then you say, okay, how does that

transition to boots on the ground? How does that transition to capability in the hands of soldiers?

90 days from the date that we were given the order to come to Germany, 90 days from the very first time I ever met General Donahue in my life and received direct guidance from him for our team, what we've done to date is, you mentioned earlier about the Merops capability. Right now, there are 12 Merops ground launch stations, 120 Merops interceptors, 45 Hornets, which are one-way attack drones and 210 Bumblebees, which are one-way attack quadcopters that can either be attack or they can be ISR. All of that kit is in the process of going into the hands of our international partners in NATO right now. Most of it, or I should say a lot of it is already in the hands of our Polish partners and our Romanian partners, based upon the incursions that you mentioned a little while ago, Riki.

So what this team really came out and did was develop a process that goes from the day the commander says "this is what I need" to 90 days, 120 days at the latest, putting that capability into the hands of soldiers. What you saw out there at Putlos, Germany the other day was only about 92 or 93 days after we arrived. And in that time, we were able to take his guidance, translate that into a demand signal to industry. Over 220 industry partners came out and said, "we have something that meets your need." Well, for us, we're not doing demonstrations just for demonstrations' sake. We need ready now capability.

So we were able to take that 220, whittle it down to 15, go out there and different from a lot of demonstrations that have been going on in every theater in the world is that the demonstrations that you will see from now on, that'll be co-sponsored by GTEAD and Army Fuse, which is a part of the Pathway for Innovation and Technology back within ASALT. The one thing you're going to see different is you won't see vendors out there operating kit. No, the vendors have to train the soldiers.

They have to train the soldiers on the capability. The soldiers will be the ones out pulling the trigger. The soldiers will be the one providing us daily assessment.

You go out there, you see privates, you see specialists, you see young sergeants. They are the ones that are making the call on what is the right capability. And as I told them out there in Putlos, they're making history because they are changing the way the Army fights.

The Army isn't telling them how to fight. The Army is giving some broad boundaries and allowing them to determine what is the best capability for how we make this work. General Donohue's Eastern Flank Deterrence Line. That is our driving mission here in Europe. And everything that we do is about deterrence. Deterrence is not just about capability that we will have.

Deterrence is about your enemy seeing capability physically on the battlefield and understanding that if I do something from an aggression standpoint, you already have capability to deter whatever aggression I may bring forward. I know we're going to get into a lot of other things, but the one thing I want to make sure I mention is this. We hear a lot about Russian aggression.

We hear a lot about NATO's need to deter the threat and to, you mentioned earlier about the eight or nine hundred, be it drones or be it missiles on any given night that could come

from Russia into NATO territory. But as we move forward, General Donohue does not just have us looking at defensive capabilities. The very next time that you come out and you watch one of our demonstrations, it's going to be what we call ground autonomy.

So what are those capabilities that are moving across the battlefield without humans? And how do we do ground launched effects? How do those systems actually launch effects, offensive effects towards our enemy?

Because one of the things we have to do is create a dilemma for our enemy. It's not just about us trying to solve the dilemma that they create for us, but it's how do we create a dilemma for them on the battlefield? So maybe I don't want to send eight or nine hundred towards NATO because NATO may send 12 or 15 hundred my way.

So it has just been awesome being a part of this, watching things move quickly. My boss in my other job, Lieutenant General Lozano was there and he mentioned something. He said that what he saw in that demonstration could cut years and millions of dollars off of some of his programs because it takes time to get to operational assessments.

We went from zero to operational assessment essentially in 90 days. So, and we only spent for this demonstration, we only spent about \$2 million. So for \$2 million, we have capability that's ready.

We have four companies that are ready to be awarded contracts. And now the PMs who could have taken a lot longer to get to this place can go straight to that company and procure ready-made capability. Even though it may still need some attempt, some additional iteration, it's ready to go and ready to put in the hands of soldiers.

[Riki Ellison]

Okay, buddy, that's awesome. Let me dive in a little bit, but I do want to, there's two Codys here, right? There's Cody Davis and Cody Lucas.

Both of them deserve credit.

[COL Christopher Hill]

Yes, absolutely.

[Riki Ellison]

But I saw some pretty bad-ass stuff, like you mentioned. I want to just highlight them. The Crow, which was what Ukraine has been doing with a truck, but you formalized that into an actual 50 cal with that off-the-shelf stuff on a Jeep to be able to take things out. That was an awesome capability that was doing small drone aspect of it.

But the other cool thing too was your 3D printer at the battalion level in the tent printing anti-drone, printing drones that can kill drones. That was amazing. And I think we were there with Frank and how much money that can save Frank from doing that.

I'd like you to comment on both those. And then I think the other big thing was those 10 or 12 systems. They're not secret, they're open, and you were able to be able to fuse those into FAD, FAD C2, and take all 12 of them in that.

So that's also very important. So we were integrated fighters. If you can comment on those three things, Chris.

[COL Christopher Hill]

Yeah, one of the things that we're learning through the war that's going on right now in Ukraine is when you're in a fight, you have to do what it takes to win. You have to improvise things that may have taken weeks or months. You have to get it done in days because the enemy is not going to slow down.

So one of the lessons learned is, how do we take a system like CROWS, a system that will allow us to put a lot of rounds in the air very quickly, similar to the way C-RAM does for incoming threats. And now you have soldiers that have the ability. And again, you've got to remember, everything that we saw this past week, this is really the last tactical mile when it comes to shooting down a drone.

I mean, you're talking about how are we protecting maneuvering forces at this point? There are a lot of other systems that probably should have shot the drone down by the time it gets to where these soldiers are. But if it doesn't happen, you have systems like that where you have a 50 caliber system like the CROWS system that upon impact, it's destroying most of the drones that it's hitting.

The soldiers, the way that it's been integrated to allow the soldiers at the tactical edge through FAD-C2. And as we move forward through IBCS maneuver, that's going to give us the ability to have that air picture across the force at the SHORAD level. Some of the other systems that would put a sensor package in the buttstock of an M4 to allow a soldier to use the actual weapon that they're engaging, the enemy to actually point up in the sky and it will level the sights on that weapon to allow it to actually shoot down an incoming small, like quadcopter drone.

We found that some of the smaller caliber systems may not destroy the drone upon impact, but when you attach it to a system like that where you can hit that drone two, three, four, five, 20 times, even with the smaller caliber, it becomes affected. You know, we had for the very first time a lot of these capabilities, and you gotta remember a lot of these companies had never seen each other before until they showed up on the range. And all of a sudden we had multiple sensors, be it active sensors like the RPSs, the passive sensors, the effectors, drone hunter, the crow system.

We had systems that had never talked to each other before that all of a sudden you can have a commander sitting behind their FAD console. And we had soldiers on the ground, we had technicians on the ground, warrants on the ground with some contractor help that allowed us to fuse all of that data into a single copy, all of that data into a single system, such as FAD C2 intact to give those soldiers the ability to not swivel between three or four or five different consoles, but to have a singular view of the battlefield. This is where we have to head because the very next step is, okay, from a decision aid standpoint, what are the times where the system can actually make the decision for the soldier to give the soldier more ability to do different things as opposed to their singular job?

You know, when General Lozano walked out and he saw a particular radar that was erected and he saw the RPSs that were out front and he saw the drone hunter and we walked in the

tent and he saw the people from his organization, from PAE Fires that were in there. The FAD team is a PAE Fires team. As a matter of fact, the FAD team works for me within Integrated Fires Mission Command.

And it took them two days to get all of this stuff integrated on the same network, something that we had not only never done before, but definitely never done in a live fire situation. So this is where we have to take industry. This is the other hidden secret to where we're going with all these demonstrations: common network.

When IVCS maneuver rolls in, part of the assessment is, can you integrate your capability into the network? If the answer is yes, you can play. If the answer is no, maybe you need to come back later.

So another thing that we're doing in order to not waste time to move fast so that not only can we affect our enemy, but we could also move the data to where the data needs to be locally, as well as into the cloud, so they can permeate throughout the rest of the infrastructure, which will be next gen C2 on the battlefield.

[Riki Ellison]

Hey, come on now. We've got to talk about that 3D printer. You missed that.

[COL Christopher Hill]

Yeah, yeah. Sorry.

You know, you got young soldiers that are sitting in the tent with a 3D printer, and they're popping out the body of drone killers right there in the tent. And so, you know, General Lozano was asking questions, and you know, just like he should, same question I would have asked about the electronics.

So this is where you have the intersection between what happens at the tactical edge and how you bring the enterprise forward. So when you have teams like GTEAD, when you have teams like the [unknown] that's working out of 18th Airborne Corps, we can now say, okay, we see what the capability is forward. So now we take the acquisition enterprise, and we are the ones that bring the microelectronics.

We actually bring the piece parts to plug into that 3D printed shell in order for that to become an actual capability. But we don't have to wait for some manufacturer in the rear, you know, to do these things. You know, we have soldiers out front on the battlefield in austere conditions that have the ability and the capability to do this.

And if you think about that happening all across the battlefield, that is a powerful, powerful message.

[Riki Ellison]

All right, Chris, yeah. Those were austere conditions, by the way, last week.

[COL Christopher Hill]

Yes, it was very cold.

[Riki Ellison]

But I know you were able with that 3D printer, because you were talking, Frank was talking about, does he have to manage with his people? He doesn't. There's those soldiers out front, which is a huge cost savings on that aspect of stuff.

[COL Christopher Hill]

That's exactly right.

[Riki Ellison]

All right, we've got to go. I've got to give it to Tom.

And Tom, this is your vision, buddy. You've seen this. You've been with me on this for two years.

It is coming to fruition. This was pretty much U.S. We've got to open this up a little bit more to the NATO group that's doing it. But it's what you've envisioned.

It's coming to life, Tom. So we'd love to have your thoughts on what we're doing and where we should be going to be able to capture, not just Poland, Romania, but the entire nine countries going all the way down that line and in depth.

[Tom Goffus]

Thanks, Riki. Sorry, I was getting things sorted. I just came up from Mons, SHAPE Headquarters, sitting next to CD Donohue, General Donohue, at a retirement ceremony for one of my favorite people in the world, a guy named Matt Van Wagenen.

And Chris, to your point, he's 35 years in the U.S. Army, was the Deputy Chief of Staff for SHAPE Operations. And he gets this. And I think he was at the heart of a lot of what's going on.

So the kinds of innovation that you're talking about, I think, are just spot on. And one of the things that I think was most critical that you said was about moving data. If you can't integrate, then you're not a player.

You're simply just not in the game whatsoever. And my belief is that the data sharing is the biggest fight, the biggest challenge for NATO in at least the next half decade. Get it right, and we'll be able to deal with our adversaries.

Get it wrong, and we'll be shooting behind the duck for at least a decade. So this is one of the biggest fights that we got going on right now. And one of the pieces that I think we need to go to is what General Donohue, with the Eastern Flank Deterrence Line is doing, which is an open architecture system.

It's not how we've done business in the past. And I think it is how we need to do things in the future. In the late 90s and the early 2000s, we were pushing the Swiss Army knife, right? One proprietary system that could do everything. And it makes sense at the time, we didn't have cloud. We didn't have a way of really sharing the data in a robust way.

This came home to roost in another one of Riki's Missile Defense Advocacy Alliance events in Poland. We were up on stage with a former SACEUR, and he brought it down to four

words. You've got to love a fighter pilot because you only have four brain cells, which is proprietary systems equals mission failure.

Because we just can't do business that way and really share the data. We have to do open architecture kind of C2. Here's why I think that is. And here's why I think moving data is so important. Moving data, sharing data, processing data. 2015, and I know that one of the prestigious gentlemen that has just joined MDAA is Glen VanHerck.

So I'm stealing this story from him. 2015, a gyrocopter with a postal worker lands on the White House lawn. And everybody rings their hands, they're like, oh my goodness, we didn't see it. We didn't see the darn thing. And the real answer was we did, or at least some people did. They have the capability and the sensors to do that.

They just didn't share it with the people that could make anything affect, make anything happen. So fast forward to 9, 10 September of this year, 20 drones go into Poland from Ukraine. And I go to AIRCOM a couple of weeks later, they put together all the data that was out there.

And when they put together all the data that is out there, all of these dashed lines and these question marks become very clear. Again, all the data was out there, it just wasn't shared. And then finally, come 2030, five years from now, there will be 650 F-35s that are European in Europe.

And if you can't share half of that data, that means that half of your investment is going on the cutting room floor. If you can't move, process or share the data, you're losing 50% of your investment. I asked a somewhat credible fighter pilot that I know, and by the way, that's the highest that the spectrum goes.

And he said, "you can't say that." And I said, "well, no, no, no. I've been telling ambassadors and admirals and generals that" and he goes, "well, the answer is really 80 to 90%."

That's what we're not sharing out of that exquisite sensor and data fusion platform that we need to figure out how to share. I think that what you're seeing in Europe is a recognition that we now have enough sensors, we're going to get more. We need as many as we can possibly get.

What we don't have is a way of sharing the data. And this is not a technical problem. There are technical solutions, it's technically doable.

It is a cultural, a process and a policy problem. And I think that the answer is going to be a common data layer or a common data backbone or a common data lake. That's what I think is at the heart of the Eastern Flank Deterrence Line is a way of sharing data in real time to bring fires to bear, to be able to funnel—if there were Russian threats trying to come across the border—funnel those threats into kill zones.

So the Eastern Flank Deterrence Line will help us get to a common data layer. And actually it was proven in Flytrap that Riki, you and I traveled to in BPTA in Poland which is 40 miles South of Kaliningrad and 50 miles West of the Suwalki corridor. And it proved that we could move data via a cloud-based open architecture, AI enhanced solution set.

And it became, it goes to a place where it's not only multi-domain because it went to the US Navy, it went to the US Space Force, it went to the British Army, it went to strikers on the ground and it went to a desktop in the Romanian MOD because what we're using is acoustic sensor data, the same acoustic sensors that the Ukrainians have. The Latvians at that point had a couple of hundred, there were a couple of dozen in Estonia, a couple of dozen in Poland with real targets sending real data through the system but it's non-classified data, below unclassified. So what this system proved, that General Donohue and his team proved, was that we could take that data and we could go multinational.

It was the US, the UK, Poland, Latvia, Estonia, Romania, multi-domain, the US Navy, the US Space Force, the UK Armed Forces, strikers on the ground and Romanian desktop and it could go multi-security levels. The cool thing about this is it's non-classified data which is like saying it's like the blood dye that they put in your heart. So that if some spills out, if you can't get it where it needs to go, it's not that big of a deal, you're okay.

What they proved was you could take it non-classified and push it into unclassified, secret, top secret, and above solution sets. And then finally it's multi-echelon. That means tactical, operational and strategic.

That means that General Grynkevich sitting in Mons can get access to the same data, the different parts of the data that he needs as a Polish PATRIOT operator. And here's what I mean by that. So if you create a common data layer where everything, including all of our legacy systems—because those legacy systems we invested a lot of money in and they're out there, they're not optimal, they're not the future, but they're still out there. We're not going to remake those systems. They can continue to feed to and pull from that common data layer. And the way you pull from it is you have a user-defined app and because you're no longer in a network but you're in a cloud-based solution, you have data-centric security.

The simple version of what that means is each piece of data has wrapped around it a piece that tells it who's allowed to access it and encryption. And so you're the Polish PATRIOT operator and you need to track a target and shoot targets. How do you do that?

Well, you reach into the data lake and you pull the relevant information using a user-defined app that lets you do that. If you're General Grynkevich sitting in Mons, you don't need an individual track. You need strategic data to be able to make strategic decisions about things like where you put your strategic reserves.

Well, you can write an app for that. So the idea of a common data layer is what we're going for. I think that that's going to be the future.

My sense is that is where the Golden Dome solution is going to need to go. And that obviously gives you multi-security level, multi-national, multi-domain and what I call multi-echelon, which is tactical, operational and strategic at the same time. Now, when I told you cultural—and General Donahue would tell you this—is when the tactical level has the access to the same data that the strategic level does and it doesn't waterfall like we've been doing for centuries now in our military. The strategic level evaluates the information and says, oh, here's what the operational needs and then the operational decides for the tactical level. People get nervous. But as he said, you get over it once you get to experience it, in a matter of weeks probably.

But that again is one of the barriers that we face in trying to get this kind of a solution out there. And I will tell you this, that in terms of open architecture, cloud-based AI enhanced solutions, Ukraine is way, way, way out in front of us. And we're going to catch up with the efforts that Chris, that you're doing and that others are doing out there in the field, things like FlyTrap, those experiments that get us forward and actually put the operators out there first.

And I would say, and eventually I'll get to writing a paper on this, but after watching the Ukrainians for the last four years, they are innovators extraordinaire. And the number one rule that they have is that the operator needs to talk directly to the innovator. You simply can't go through layers to get this done in any right or fast fashion.

It takes too long. And by the time the loop gets closed, you've already missed the opportunity to innovate where you are. And I would say this, and Riki knows him, some of the folks at a company called SkyFortress in Ukraine that developed these innovative sensors, the acoustic sensors that see from ground to about a thousand meters for group three, that means Shahed drones, loud drones.

First time I met him, he looked like he hadn't slept in three months, because he hadn't slept in three months. He was on the battlefield every night with the operators, taking their data and tweaking the algorithms to make the cloud-based AI enhanced open architecture system work like it needed to. So the innovation ecosystem is something that we definitely are behind on, but the efforts that Chris talked about, 3D printing, those kinds of things on the battlefield, I think are the next layer up.

So I'll stop there, Riki.

[Riki Ellison]

Okay, and Tom, just so you know, your words has turned into action. Our guy that did what you talked about in FlyTrap 4, FlyTrap 3.5, Dene Farrell of the 18th Airborne, CD hired him as the chief technical officer. Last Monday was his first day.

He was with us, with me and Chris on that, and he is putting that plane, that data plane in there for open C2. That's going to happen now. And I just want to make sure everybody knows, we're not incrementally building up what we already have.

We're not. This is brand new, this is where we got to go. And I think the other big thing that we have, as you acknowledged to everybody, it has to be cloud-based now, because you cannot have the compute power without cloud-based.

You can't have the storage without cloud-based. You can't have the scale without cloud-based. And it's not one cloud.

It's going to be multiple clouds that you have to use, and NATO's got to put their cloud out. And I guess we'll follow up on where that is, but the U.S. has got cloud that they're working through. And I think the big thing that our Western world has got to get over is this enigma code break in World War II.

We're scared to have open data because of that one break. We're beyond that. This is 50, 60, 70 years.

They're going to penetrate into the cloud, but we're going to get through it and go over it. We cannot keep slowing down by not going into the cloud and just going to an old stovepipe. So this is a huge movement.

It hasn't got right yet. We're still not there yet, but we're on the verge of it to start this. Just tell me, Tom, where NATO is, because I think they're behind this on the cloud with what Dene's doing, and it's going to start right here with what we're talking about, the EFDL.

That's the first thing we're going to be doing.

[Tom Goffus]

Right, thanks, Riki. So one of the other hats that I, one of the other jobs we're doing is trying to learn the lessons from the Ukraine battlefield. And these are gold nuggets.

They're just laying there on the ground. You don't have to dig for them. You don't have to drill for them. You just pick them up and put in your pocket. But Ukraine has a lot of data that they want to give to NATO in a NATO-Ukraine Lessons Learned Center. It's called JATEC, Joint Analysis Training and Education Center in Bydgoszcz, Poland.

We're doing a cloud solution for that. Admiral Pierre Vandier from ACT is launching into this. He got approval to do it, to fund it.

He sent me text messages with him leaning on the cloud equipment to make it happen. All the equipment is there. Like I said, the solution is there to be able to handle large amounts of data from the Ukraine battlefield.

And we're hoping that it's going to be operational on NATO cloud in January of 2026. So two months from now. They've got all the equipment to do it.

What we don't have, to my point earlier, is we don't yet have a policy on how to accredit it. How can you accredit this system in order to use it in a safe manner? All of our tools are designed for network-centric security.

And we want to go to cloud-centric security. And so that's one of our biggest challenges. And Riki, right after this call, I'm going to be talking to some of the hyperscalers who have done this already in the US system.

There are secure clouds out there nationally at the secret and even higher level. So this is figuring out an accreditation process to go along with the capability and essentially get the culture, the process and the policy to catch up with what's available out there. And to your point, one more point on, this is greenfield.

It has to be greenfield. This is not bolt-on to previous networks. Because as soon as you do that, you inherit all the limitations on those networks, all the things that come with that.

So it has to be greenfield. It has to be brand new. It is not system of systems.

It's not a federated system of systems. Many of our federated system of systems are actually proprietary, which makes it harder for things to talk to each other again. So when we get to this open architecture piece, one of the big things is we've got to go Greenfield, but I do want to stress that this has to, in the end, be government defined and government owned, though it is commercial solutions.

And we need to be the gatekeepers on that. So that's just for what it's worth, thank you.

[Riki Ellison]

Great, great. Tom, let me just, what we missed last week, Chris, a little bit from my perspective, was we didn't have many foreign countries in the competition or the prize money from that. And that push from NATO, we got to have other companies from other countries into the things that Chris was doing, because it's not US only, man.

It is everybody. And that twin lens that the Germans have, that passive sensor is phenomenal. That needs to be put in play as a second layer to add to it.

But we have to get team participation in what they're doing on the front. It can't just be US. In any way you can help get funding in there to support the prize money with Chris and with Frank to make that happen is huge.

That's what's missing, I think, from what I saw. We gotta get our teammates in the game here at all levels.

[Tom Goffus]

I couldn't agree more. That is something we need to make happen. So two data points on that.

One, last month we brought, invited nine nations from Norway all the way to Romania, anybody with a border with Russia, Belorussia or Ukraine, to see what the Latvians have done in the Control and Reporting Center, the CRC, outside of Riga in Latvia. Why? Because Riga has 1,000, in less than three months, they put 1,000 acoustic sensors out there and they're starting to play with it already.

One of my messages was, unless you have counter-UAS capability, how can you learn how to do counter-UAS? And rather than developing your own from a clean sheet, you could buy three and a half years of combat proven refined capability in that system. It is not a silver bullet, but it also doesn't break the bank.

It'll be less than 30 million euros when Latvia gets done with it. The hard part, as Chris has talked about, has been integration with the national C2 system with what their system is. They're working on it, but we had nine allies there to get to see what it is.

And I think that we have at least two more, if not three more, that are coming to the table to look to build an array of acoustic sensors. And as you and I have discussed in the past, build it and they will come. I'm convinced that when you can demonstrate this capability, that'll be there.

And then at the end of last week, we took 32 ambassadors from NATO, went to Finland, and they had four fantastic companies up there. One was an integrator capability, similar to

something you might see in Palantir, but a slightly different level, the ability to integrate things, many different kinds of things, from space to EO, IO sensors, to SAR sensors, all over the whole spectrum there. So it was that open architecture piece that you're talking about, a company called Reactor.

We also saw a counter UAS company, very well-developed, did a demonstration on scene there with all the right answers, not just demonstrating capability, but testing it. What do I mean by that? In the counter UAS world, and I know Chris knows this, what we tend to call a test is usually a demonstration, where a limited, very limited RF environment, where you're out in the middle of the desert, there's nothing else out there, you send a drone by and then you pull up your screen and go, look, we see the drone.

And everybody goes, hooray. And then you pull it into an urban environment or even just a regular base environment anywhere in the United States, and there's so much noise, you see nothing. So we need to get out of demonstrations and into tests.

And I've been told by the people that have done counter UAS for well over a decade, a decade and a half, and that's law enforcement. By far the number one owner of counter UAS systems in the United States is not the military, it is the Bureau of Prisons under the DOJ, because they've been seeing this stuff forever. And what they tell me, and I talked to Interpol as well, their center of excellence is in Singapore, and they've been doing a lot of testing over the last half decade.

And what they said is counter UAS capability has improved 10% in five years. In any innovation ecosphere, that's appalling. And part of it is we're not holding them to account because we're not testing, we're just demonstrating.

But we're getting there by doing the experiments that Colonel Chris Hill talked about. And Chris, I couldn't agree with you more that the operators get to choose. And in the innovation world, that is also what is happening in Ukraine.

They have what's called the drone army. You get points every month. And then the drone operator takes those points and is allowed to purchase drones above and beyond the monthly allocation.

What that means is the operator is selecting the ones that works because he or she knows which ones works. That's that operator to innovator connection that I talked about. The other thing is that the company that didn't get any drone offers can go and talk to the drone operator and go, "Joe, you didn't pick any of my drones this month. What's the deal?" And Joe goes, "well, Sergey, what happened is your drones always make it to the target. But for some reason, they don't do any damage. You got a warhead problem, go fix it." Or they go, at end game, there's jitter. And so the drone, half the drones I can't make hit because the jitter gets so bad, "go fix it."

So now the innovator knows what to work on and knows how to be competitive for the next round, which, oh, by the way, is only one month later. So innovation, open architecture, getting more companies in the mix. And honestly, most of these companies are dying for the opportunity to be there.

So it's more about invitation than it is about funding right now. Once you get to scaling, that becomes a funding issue. That's a different problem.

Scaling and adopting is tougher. But I think if we can get there, we can do it. Honestly, on counter-UAS, Riki, the dollar amounts, the Euro amounts aren't bank-breaking.

They're more couch cushion money. And so nations can afford that. What I think, so this is the distinction I make with the acoustic sensors and the open architecture C2.

I think NATO needs to have a cloud solution, open architecture, way of integrating things that the nations buy. The nations buy the sensors. They buy that sensor suite, sensor system that feeds the data.

But NATO does the data integration and makes it all good. So that's kind of, I think the strategy overall right now would be more in that line. And that common funding would go to help make sure that we have that data backbone, that common data layer that everybody can pull from.

[Riki Ellison]

Thanks, Tom. And just so you know, Mike Guetlein in Golden Dome is working some of these bigger problems of the cloud, of data share at the highest levels. But I also think what you're doing in Europe, what we're doing in Ukraine is a great learning lesson for him as our country figures out how to defend itself.

All right, we've got a great one. We got Mark Montgomery. He's on board.

He was former planner three for Europe, and he's been highly visible in Ukraine many, many times over the last couple of months. So he's engaged with it. All right, Mark, take a shot.

[RADM (Ret.) Mark Montgomery]

I thank you very much, Riki. And here's how I look. First of all, great discussion by Chris and Tom.

They didn't leave a lot of room and you didn't leave me much time. So that works out great. And I'm gonna answer the one question that was asked in this.

So I'll get us to the point where you can kick it back. Look, there's three broad areas in here that we need to think about. When we think about the European defense, European missile defense line, I hate to say wall because this is not a wall. If you know how Ukraine's fought, it's not a wall. But it's a integrated defense system that the architecture of which allows you to engage weapons at the right time and place. And it's three things that we've heard.

It's sensing, it's shooting, and it's the integration of the two. And across it, I wanna say, and look, supporting that is a culture that CDO Donahue absolutely represents. And that's a willingness to look at unclassified systems, a willingness to look at passive systems in a way that the casualty conscious U.S. Navy and Air Force historically had not done. A way to think about electronic warfare, a way, you know, a culture and a leadership that expands your aperture as you study this. So those three principles are that first, the sense he's gotta be multispectrum. And here it's part of it's that active passive spectrum.

And you know, I'm all in with Tom and you and Chris now on the acoustics in Russia, in the Ukrainians against Russia. But I'll tell you, the Russians have elevated the altitude at which Geron twos and threes fly. And that makes the passive less effective.

That's okay. As they elevate, they then expose themselves to radar. Their heat signatures are clearer.

They're no longer obfuscated. Their ability to hide from train bounce jamming, much harder, right? So hide within train bounce jamming harder.

You know, everything helps. So as long as things are, and I'll talk about costs in a minute, at a reasonable cost, that integrated system should use every possible active and passive sensor. That's part of the spectrum.

The other spectrum is an altitude spectrum. That passive stuff is generally on the deck. There's land-based radars, but they have limitations.

Although there are special radars that can use spaceway bouncing off of the ionosphere in a space which is used heavily against us by China, but can be used by us in Europe and other places. Then there's, as you and I, you know I advocate for, there's aerostats. You know, getting a radar at altitude's great.

People tell me it could get shot down. Well, fuck yeah. An AWACS can get shot down.

A ship can get hit. Patriot launchers get hit. Everything gets hit, it's war.

Yes, it might get shot down. I'd buy two, right? I mean, for every one you need, right?

I mean, there's solutions to this problem. And the polls have really lashed on aerostats after watching the Israeli success with it. And it has been successful in Israel.

I get one of them was hit on the ground. Got it, noted. Barak tanks have been destroyed.

That doesn't mean that Israelis are walking away from Barak tanks, right? I mean, we gotta accept that. So there's the spectrum of altitude and elevation.

And eventually there'll be space. And you know, we rely heavily on space-based for lots of temper and warning. So you go all the way from space to near space to passive.

And by the way, you can also have loitering drones. All right, so this is all that. Now you wanna keep costs down.

So you wanna keep humans involved in physically manipulating things to a minimum. And every weapon system I mentioned was like that. They get you down.

It worries me when the answer to everything is throw up an AWACS with 19 crewmen in it, right? I mean, that just, I just, you know, cha-ching, right? The personnel is 55% of the DOD budget.

So multiple spectrums. The second is low-cost effectors. We have got to solve the defense low-cost effector.

And there's two parts to this. And like, we've solved the offense one, by the way. As you and I have discussed many times, and Tom has been a clear part of, we're delivering ERAM, Extended Range Attack Munitions.

I'm not gonna, I'm gonna say this term loosely. I do not want somebody in the Defense Industrial Base losing their mind. It is a JASSM-ER-like weapon.

In other words, long range, certain types of seeker warheads, certain level of explosive best, not as big explosive mass, but at the right range at a very low cost, 10, 20% of the normal Defense Industrial Base delivery. Why did this happen? It's because the offensive end of missiles, we could, a large part of the cost was the body.

And we drove that down through additive manufacturing. The fuel still cost the fuel, the explosives still cost the explosive, the sensors still the sensor, but those were not the highest cost things. The problem on defense is, and I wanna break this up into drones and non-drones.

Drones, I get it. We can get to cheaper effectors pretty quick. Non-drone, which is where I'm hitting a cruise missile or a hypersonic or ballistic going Mach one to five, with another weapon going Mach three to five.

This is no longer like algebra that me and Riki can do. This is now like advanced calculus that Chris can't do. Right, you know, that, you know, you kinda, you know, the two weapons are going Mach nine at each other. Suddenly the sensor head really matters and the thinking of the weapon. And that, we have not figured out how to drive down on that cost, Riki. That's the cost.

If some Defense Industrial Base-
[Riki Ellison]
How do you drive that down?

[RADM (Ret.) Mark Montgomery]

If I knew that, I wouldn't be on your show. I'd be making a zillion dollars and just donating you some money, right? But look, I'm gonna tell you right now. SI don't know how to drive the cost of the offensive one down five. We didn't buy JASSM-ER because we liked paying cash. And we didn't buy LRASM because we liked paying cash.

We bought them because they were the best thing that delivered at that, any cost, right, at a cost. And now these-

[Riki Ellison]

Can we make them dumber? Can we make them dumber?

[RADM (Ret.) Mark Montgomery]

That's the problem. You can make the offensive ones kind of dumber than defensive. Defensive weapons have to be, even if you go for an 80% solution instead of a 95% solution, there's still a lot of maneuvering that happens in end game for a collision.

Defense is harder. I mean, you'd like this, Riki. I mean, defense has to be smarter. Now that isn't always true, but in this case, defense has to be smarter. So I'd say this, Riki, in the context that we've got to drive that cost down.

So multiple spectrum, low cost effectors. And look, two companies I'd never heard of, L5, G5 Technologies, 5th Gen Technologies, and CoAspire developed ARAM. I'd never heard of them before three years ago.

So you and I have not heard of the company that's going to answer this question I just asked you. By the way, Mike Guetlein's got the same thing going on in space with space-based effectors. You and I do not know the names of the companies that are going to solve that solution, but they're going to.

And then finally, it's the integration of this is hard because it can get exquisite fast. If you maintain this, if you're pulling unclass into classified and maintaining a classified, integration gets hard. If you can figure out how to pull classified down, mix it with the unclassified, and run it in a unclassified cloud that's pushing data around, I think that's going to be cheaper.

But what I'm talking about can't just be done by Frank Lorzano or his Navy equivalent or his MDA equivalent. It's got to be done by the IT people, the security people. A ton of people get involved in this.

So you get data without latency, right? Fast, agile, speed of data, data, moving around from unclassified, classified, and highly classified systems into a display, both the command and control is one element. And as J.D. Gainey would tell you, you better have a separate data flow, one with the other data going. This is really hard. So, lowering that cost, the easy part of that, nothing I said was easy, but on the doable side, this is approaching that low cost interceptor on the, it's going to take real effort.

Now, here's the other thing. There cannot be a European solution or an American solution. There needs to be a transatlantic solution to this. And then we share that solution simultaneously with Japan, Taiwan, and Korea, and Australia, our treaty allies out in Asia. And we probably share it with Israel and potentially some other countries there. But we cannot solve this alone. There's no JADC2, it's CJADC2.

And I say that knowing that there's challenges with JADC2. There's coalition in this. So Riki, I think my final thought is sensing, shooting, and integrating.

If you're talking about how to attack this Eastern European defense framework, I'd put everything in those three things and I drive it from a culture that's consistent with what CDO Donahue shows right now. And you and I know that, and we know that that's the long-term. So Riki, I'll pass it back to you.

[Riki Ellison]

Mark, I'm going to ask you two questions. Is the cloud possible? Are we really going to be able to do classified information into open clouds?

Or is this just too far out there? Or is the U.S. government and the service is going to have their own special cloud to do that? Is that realistic for it?

And the second one, I want you to take a shot a little bit here. Why can't we do what Chris is doing at this low level prize money innovation, what he's doing? Why can't we do it with IFPIC?

Why can't we do it with some of these systems that are taking forever and ever to get? Is this a... And Chris, you can chip in on this.

Is this a revolution or is this not going to... It's separate because the altitude, the further away, the more expensive. But you also see Mike Guetlein doing prize money for space interceptors.

So he's thinking about doing something to get out of what's killing us.

[RADM (Ret.) Mark Montgomery]

I'll go and pass it to Chris. So on the cloud, it's possible. There will be a low classification to no classification cloud transfer eventually, yes.

Will we still run something above it with U.S. only unique sensors that are part of a—probably? And does that mean we'll pay more? Yes, luckily we're starting out at 900 billion. So we're probably okay. I'm not going to freak out over that. But for things we're going to provide to key allies and partners, we've got to keep the cost down and do it.

So I'm not going to say there's no classified information transfer going on. I would hope as much as possible gets pushed down as low as possible, as fast as possible.

[Riki Ellison]

And you think this European deterrent line is going to be able to create that force for the first time?

[RADM (Ret.) Mark Montgomery]

I think it'll be a good, look, because you have a dynamic leader out there, American leader out there pushing it, yes there's a chance. Look, I'm not betting my kids' 529 just yet on anything in this realm, or anything Mike's doing either, Mike Guetlein. I mean, I think, I hope it all succeeds, but I don't think it's reached like bet your 529s just yet.

The second one, the second part, and then I'll pass it to Chris, is this innovation is going on everywhere. The army is using this. Look, IFPIC and IBCS, you're not going to end up, at this point, 10 and 14 years into programs, you can't throw prize money out there and think you're going to get the solution at that point.

You know my feeling on both of them. On the other hand, do I think there's a smart army lieutenant or staff sergeant out there that absolutely has a good idea on how to use some of that? You bet.

We are full of those men and women. So I'm not worried about that. So you're going to see more of this.

You know, there's a limit to how much startup can be going on in the military, but we're nowhere near that limit. I wouldn't worry about it. I want to give Secretary Hegseth some

strong kudos on his speech two Thursdays ago. He laid this out, I think it was November 7th. He laid this out. He said this kind of innovation is what he wants.

He wants to shake up the procurement process, the acquisition process. Some of it's top-down, like you mentioned, and some of it's going to be bottom-up, like you've just mentioned. So look, I think you have an open door with Secretary Hegseth to these kinds of solutions.

And Deputy Secretary Feinberg will, you know, kind of put a little bit of compliance on it, and I think we'll be in great shape. Chris, back to you.

[Riki Ellison]

And Mark, just before going to Chris, that revolution that's happening, is that driven? Because the whole thing could be driven by Golden Dome or it could be driven by the EFDL to get to where, to catch that bandwagon with Feinberg and with-

[RADM (Ret.) Mark Montgomery]

It's not going to be driven by EFDL. Golden Dome is enough money to kind of drive it, to help it. But in the end, and be careful of the word revolution. This is still an evolution.

It'll become a revolution when there's a PEO out there who bets on something, completely fails, and gets another thing, succeeds and gets promoted. You know, we need to begin to not punish people for taking risks. Right now, we're in a risk free-

Anyone who's made two, three, one, two or three stars, has everything's been a success. I use that in air quotes, because yours and my determination of success does not equal twice as much as you expected to pay at three times the delivery length. But that is a success inside the Department of Defense.

Chris, over to you.

[COL Christopher Hill]

So on that last point, so Mark, you went exactly to the point that I was going to make in that, we are in a high risk tolerance environment right now, which means we cannot be afraid to unleash industry. We have to unleash industry and take the constraints off in areas of saying, well, there are only certain areas where innovation can play. No, we limit ourselves when we do that.

Because even on a program as large as IBCS that we talked about last week, we absolutely should be introducing commercial based solutions into that architecture. There's absolutely no reason why we shouldn't and no reason why actually we're not gonna be doing that moving forward. Now, the second thing is, I don't think that this is gonna be something driven totally by Golden Dome.

It's not gonna be driven totally by EFDL. One of the mandates that we were given is we have to be regionally aligned and globally focused, which is why come January, you will find a GTEAD office in Hawaii working directly for the USARPAC CG, which not only looks at what USARPAC is trying to do from an army perspective, but it looks at our Australian partners, it

looks at our Japanese partners, it looks at our South Korean partners. Because the solution is not going to be an army solution.

It may not be a US solution, but it has to be something where we open up the aperture for industry. It doesn't matter where it comes from. We have to open it up totally.

Here in Europe, there's a task force X right now, which is run by Brigadier Chris Gent from UK. That's doing the exact same thing that brings together all of the NATO countries. We've got to do the same thing in the Pacific.

We have to do the exact same thing. General Guetlein is playing close attention to what's going on. Because a lot of the things that we are finding will have direct translation to how we do things from a Golden Dome perspective.

Now, the one advantage Golden Dome will have, that Mark just mentioned, is they're going to have the power of the purse. They're going to have the dollars and the horsepower to put behind some of these innovative efforts. But that's why when you hear us talk about capability forward, very quickly, you'll hear us mention another theater, very quickly, you'll hear us mention the Southwestern border and very quickly, you'll hear us mention defense of the homeland.

We got to tie and interweave all of those together.

[Riki Ellison]

Hey, Chris, can you just talk why we can't do this with the IFPIC? How do we get that moving faster? To Mark's point on the complexity of the defensive maneuvering cost, how do you, from your perspective, because that's going to be, that's a challenge to us still.

[COL Christopher Hill]

Yeah, I think- Well, and I don't want to speak for IFPIC since I'm not the IFPIC guy, but I would tell you that when we have systems that we have these large primes, some of it comes down to IP and who owns that software. Because the ability to get in and to bring in new innovative companies, a lot of times, if you don't own that software, there's a limiting factor, which is why a lot of the guidance that came down through the DEP SecDef had to do with IP rights, right up front. At the very beginning, we need to relook what we're asking for at the very beginning.

One of the things we were talking to earlier, you do need more exquisite weapons when it comes to end game for a lot of the air defense fight. However, when you start looking at some of the autonomous systems that we're going to put forward on the battlefield, we also need to give ourselves an opportunity to take more shots at some of these systems with dumber weapons. Yeah, the weapon may be too dumb for an end game hit, but maybe the weapon is not too dumb as that particular threat is ascending or when it's in a part of this flight pattern where it's not doing some crazy maneuver.

So I think it's how multiple shots from a standpoint of effectors, multiple layers from a standpoint of sensors. It has to be a layered effect, whether it's seeing this thing, tracking this thing, or actually trying to affect it, whether kinetically or non-kinetically.

[Riki Ellison]

Hey, Chris, what about loosen up the damn requirements? I mean, some of these requirements, or is that the risk, right? That seems to be killing a lot of the production.

[COL Christopher Hill]

So a specific point that I made earlier last week, had the opportunity to brief the secretary, the chief and the sergeant major of the army. The particular area that I mentioned during that discussion was exactly what you just said. So how do we go from innovation to the scaling of this capability?

And it has to be, and this is Chris Hill's opinion. Nobody in army is saying that this is what we're gonna do, but this is Chris Hill's opinion. If we do not loosen the ability for the new PAEs, the new portfolio acquisition executives to maneuver within their capability box, within that requirements box, if we don't loosen that to give them an opportunity to pull innovation in quickly, reprogram dollars and go after that capability, we're picking at the scab, but we're not pulling it off.

We gotta rip it off. We have to rip it off, and you gotta do it from an acquisition standpoint, from an innovation standpoint, but you also have to do it from a requirement standpoint.

[Riki Ellison]

Okay. Thanks, Chris. I don't know if Mark left us, but I know we're over.

We're over about 10 minutes, but it was a good discussion. Tom, do you have any closing remarks? I think Tom is out.

It's just me. Hang on. Is Tom in?

There's Mark. Mark's got some- Mark's back in.

[RADM (Ret.) Mark Montgomery]

Okay. Yes, sir. I just dropped for a second.

I just wanna say thanks. A good discussion. Chris, I learned a lot.

It's great to have Goffus on as well, Riki. I gotta get going, but I just wanna tell you, this is fantastic and a good, sharp discussion.

[Riki Ellison]

Thanks, Mark, for participating. Thank you for doing that. Do we have any questions?

[RADM (Ret.) Mark Montgomery]

No, I have one question that came in in my- Okay. Once I had my nice, I like that compressed time.

[Riki Ellison]

Mark, you can see how we've progressed, man. This is where we're at today, where we were a year ago or two years ago.

[RADM (Ret.) Mark Montgomery]

Well, CD, a few other people deserve credit. Just a handful. Obviously, the Ukrainian work, but CD's decision to really embrace it and your highlighting of it, I think are big elements of that, Riki.

So thank you very much.

[Riki Ellison]

Thanks, Mark. Okay, appreciate it. Tom, are you there?

No, Tom had to go to the meeting. Okay, Chris, you got the last remarks.

[COL Christopher Hill]

So once again, Riki, this is a great venue for these discussions. And it's discussions that we have on the side, but we need to have this public discussion. People need to hear the things that we're talking about and understand the challenges that we have, while at the same time, understanding that we're putting wins on the board.

This past week, the past two weeks, those were two wins. And one thing about working for General Donahue, he likes to see things progressing. It's not just, hey, I'm working on it.

No, if you're saying you're working on something, that means you're not completing things. We want to complete things. So every single quarter, we're gonna complete something and sometimes multiple things in that quarter.

So we're gonna keep doing what we're doing here. We're gonna keep working with everybody and their brother, be it NATO, be it our partners in the Pacific, be it our partners back home, from a Golden Dome perspective, definitely all of the PAEs with the capability that they have looking forward to moving into the Pacific come January and working with General Clark and his team there. But it's all about putting wins on the board.

And as one thing I learned a long time ago, if you and your son get out on the basketball court and you play some little pickup basketball, it's all fun and games until you start keeping score. Then things get serious. So we have to keep score with every single thing that we do.

And we have to let our adversaries know by seeing these demonstrations. We want them public. We want them to see the capability that we're bringing to bear.

[Riki Ellison]

All right. Hey, by the way, you know CD's a strong safety buddy, West Point football. He's got that Ryan Lott in him, man.

He's leading, he's wanting to give me a heads up.

[COL Christopher Hill]

Hey, there's a reason I stacked my team with football players.

[Riki Ellison]

But hey, seriously, what happened last week was just a jump, jump, where we've been. Bringing it to reality. And we didn't really get into reality a little bit, but I saw it, you saw it,

that there's actual, a layered, defensive capability today that we can put in right now, that we are putting in right now.

So that's real. It's not a vision. It's not what it was six months ago or a year ago where we're envisioning.

This thing is real. And you have moved dramatically to have innovation on the front end with the counter-UAS to bring everybody in. And your job should be able to bring in the best talent in the world, in the world on your deal.

We've got to get that to that level where you can have that and then be able to everybody to integrate into that. That's coming, it's all there. But this was the first kickoff and it was so fortunate for us to see the MEROPS, the surveyor, the 12 systems that were out there and see your team, because it's about leadership.

It is about leadership. And risk-taking. And calculated risk-taking to win.

And it's trust. And you are winning. And those were wins last week.

They were wins. So that's how we go, baby. World champions.

So thank you. Thanks everybody for tuning in with us. We went a little long, but I appreciate it.

Thank you.