

Virtual CRT Russian Drones in NATO Countries

[Riki Ellison]

Good afternoon, ladies and gentlemen, from probably the first day of fall here in Washington, D.C. in Alexandria, Virginia. I am Riki Ellison. I'm the founder and chairman of the Missile Defense Advocacy Alliance. Our mission is to make the world safer and our nation safer through the development, deployment, and evolution of missile defense.

It has been a week of adversity. It has been challenging. And speaking to you from understanding a little bit about world championships, you have to be able to embrace adversity. Adversity either breaks you or unifies you. And what Russia did last week is testing that with the resiliency of NATO.

And what's happened from our perspective is unification. And last Friday, we saw the Supreme Allied Commander, Grinch, put forward a mission. And that's how you win military-wise. Your combatant commander owns the mission and puts forward the mission. And that mission is to defend the Eastern European nations. It's called Eastern Sentry. And that is a complete, layered capability to defend from anything on that. And there is no question that the air dominance and the air superiority of NATO is second to none. Second to none. Russia doesn't have that Air Force capability or ability to challenge that in that full capacity. And that was used for the defense of NATO nations and explicitly put forward by Grinch. We also know the Eastern Flank Deterrent Line is part, will be a significant part of the Eastern Sentry part of it.

We at MDAA have been involved heavily with Ukraine. We began that relationship in November 2023 in London, bringing forward their new technologies of being able to defeat drones with cheap, distributable, attributable capabilities. Our ability to help advocate that and move that forward, we took it to R&E in January, to the Pentagon, to our North Combat Commander, Indo-Pacom Commander. That eventually moved into a demonstration of that in Ramstein in '24. It moved into the Yuma Testing Grounds. And it moved from there last summer into Smârdan, Romania, where we demonstrated a cheap, attributable, distributable data, open data architecture in front of 11 NATO nations. We further took that to Oahu, Hawaii, and a similar aspect of it. And then earlier this year, NATO purchased 17,000 of these for Ukraine.

So it is real. And one of the issues that we're trying to advocate for is why haven't these NATO nations that have been on the border of Ukraine the last three years, watching exactly what's on as it escalates to the 700, 800 a night, why haven't they had and put forward the same sort of capabilities that Ukraine's doing: cheap, distributable, that works. And they've waited now until this moment where that's going to happen now, but it should have been in place. That's a question we would like to address to understand that. But I believe that is coming forward with the eastern flank deterrent line and with the eastern century aspect of it.

Another big point is how are we deterring Russia from doing this? It's not Article 5. It's not our nuclear capabilities. It's not our air superiority. Russia is doing this. And we haven't been able to deter that. And does that mean what we're doing now is having to have a defensive capability, along with an offensive capability that we're not willing to strike back at, but we definitely have to think through this. What is the future to be able to deter someone like Russia putting capabilities, you saw, I think there were 19 of them on the 10th of September

that came across the line. And this is by far not the first time they've done this. They skirt the borders of Ukraine with their drones before going in Ukraine. They've skirted it on the Danube River. They've skirted on the Poland border. And there have been incidences over the last three years, reoccurring of Russian drones on NATO territories. But the sensitivity to react to shooting down these things, and what that escalation is, we haven't addressed that until now, until last week. And it took a couple days to address it. And here we go.

So, I think this is a timely discussion. We have experts from Ukraine, in Ukraine, to have a great discussion today on this important topic. Because we have to deter against nations, nuclear nations, and non-nuclear nations, when our nuclear deterrence doesn't work or allied partnerships doesn't work. So that's what I think our discussion will be today.

And we have three great guests with us, great teammates, great wingmen, great sailors, shipmates. So we do have "Corky" Charles Cochran, who was at the beginning of this. He was the Deputy DECOM for U.S. Air Force Ops when this fight started with Ukraine. Very prominent air fighter on that. And he's over in Ukraine. Both him and Mark will be in Ukraine next week, advising. They've been doing this the last two or three years. We have Mark Montgomery, who is one of the smartest guys on this subject. We're lucky to have him here. He's formerly the planner for EUCOM. And we have KT, who this is his second time here, who is an expert on Ukraine and been in the fight for Ukraine with the first war way back in 2014. And in this war, with technologies and aspects for it.

So, we have three great guests for you. All right; I'm going to kick it off to Corky. He's on our board. And Corky, it is yours to take.

[Maj Gen (Ret.) Charles Corcoran]

Great to be here with you again. And it's great to see Mark and KT, two wonderful human beings. I look forward to hearing from them as well.

Look, the ability of a nation to defend its sovereign territory, including its airspace, is non-negotiable. Anybody who questions that, just look at the uproar over our southern border here in the United States over the past few years, right? You cease to be a nation if you can't do your number one job as a government, which is to defend your sovereign territory. So that's kind of what we're seeing here, right? The sovereign territory of Poland and now Romania has been threatened. And beyond a nation, an alliance must defend the alliance's territory, or you cease to really be an alliance that's functioning.

So, I was very encouraged. You mentioned General Grynkewich, Supreme Allied Commander, who came up on the net right after this happened. He said, it's not an isolated incident. And while the assessment is going on, we're not going to wait, we're going to act. That's exactly what we need the alliance to do, is to act first. We'll assess as we go, but we have got to act. We got to defend the sovereign territory, including the airspace, that is NATO.

And so you saw Eastern Sentry stood up. Look, we take this back a lot further. We've had enhanced forward presence brigades in the Baltics in Poland, so 1,000 troop brigades in each of those nations for several years. We've done enhanced air policing in the Baltics, the nations that don't have air forces for several years. When the second invasion happened in 2022, we beefed up across all eight nations that border Russia on the Eastern Front. We beefed up the air policing, the sensor network out there. But it's kind of ebbed and flowed over the last few years. And by not staunchly defending it every day since then, we've opened

up a little bit of a window there that Russia has now exploited to once again test our resolve as not only individual nations, but as a collective, that is NATO.

So, it's good to see Poland declare Article 4. It's good to see the nations come together for consultation. It's good to see Secretary Rutte and SACEUR both back in Eastern Sentry and getting that going, and several nations participating to help that out.

The assessment will take place. I think KT is going to talk a little bit about this notion that these could be accidental incursions, and I think we'll put that to bed. So I'll let him cover that.

But some encouraging things about Eastern Sentry. It's actually SACEUR Allied Command Operations is running this, but they're side by side with ACT and bringing new capabilities on. So, I think that's a lesson learned from the Ukrainians here, the Ukrainians who have been very resourceful in developing and fielding rapidly new capabilities to counter Russia within Ukraine. And it's nice to see NATO doing that as well. ACT normally sits where it is back here in Norfolk in the United States and thinks pretty far out. So, to have them side by side with ACO is a good thing for NATO. It's a good development in NATO that's usually a pretty slow moving organization.

Getting into a little bit more tactical away from that strategic level of Eastern Sentry and how do I think we as an alliance really need to get after this. The first way to counter this really is forward in Ukraine. If you look at the flight paths of these primarily Shahed's that came into Poland and then eventually Romania, they came through Ukraine. And so, there's a really good sensor network in Ukraine, and there's capability in Ukraine to shoot these things down, but there's not enough.

We got to give Ukraine more capacity and more affordable capacity. That's why a lot of folks have been working to get weapon systems like the Advanced Precision Kill Weapon System, which are rockets that cost \$10,000 to \$15,000 a round on systems like the F-16 that could carry up to 48 of these. And so a single F-16 on an hour and a half long sortie could shoot down up to 48 Shahids at \$10,000 to \$15,000 a pop versus only shooting down four with the four AIM-9 sidewinders that it carries at about \$500,000 a pop. We've already proven this capability out, we being the U.S., we're using it on our F-15s and F-16s in the Middle East, and we're validating it on partner aircraft in Europe. There's no reason we shouldn't put this forward in Ukraine and give them more capacity, more affordable capacity to take out these drones that are flying across their airspace so that they never even get to the border that is NATO.

Other things we can do, we talk a lot about in these forums, that the really good way, the proper way to go about this is to kill the archer and not have to shoot all the arrows. We know where these Shahed's are being assembled in Russia, and if we give Ukraine the capability to take out those assembly plants, those factories, that would be even cheaper and even better.

And so Ukraine is getting some extended-range cruise missiles from us over the next few months, several thousand of them, the ERAM, but weapons like that that allow Ukraine to exploit long-range air power to take out the archer rather than have to deal with the arrows is money well spent.

And exhibit A on that is Israel. Look at what Israel did. Yes, they had a strong multilayer drone and missile defense in place to deal with Iran, to deal with the Houthis, Hezbollah, and

Hamas. But the other thing they did as they got serious, particularly in Iran, they went, and they took out the launchers rather than dealing with thousands or tens of thousands of missiles and rockets. There's a few hundred launchers. They took out almost all those in their 12-day campaign. You see them doing that now with the Houthis. They're taking out the launchers rather than having to deal with every missile or rocket that has launched their way. So, giving Ukraine that same capability will be helpful.

The other thing you see the Israelis doing is they're using their attack helicopters, something that can fly at a lot lower cost per hour than a fighter plane, can carry those cheaper weapons and a lot of rounds, and they can help take out drones. Something like that, getting that to Ukraine is helpful as well. And of course, we want to have all this capability in the NATO countries there, the eight NATO countries that are along the border with Russia as well.

This idea that defending your territory is escalatory, this talk that we hear, that's just crazy talk to me. In no way, shape, or form is a nation defending its sovereign territory escalatory. So, I think we need to put that to bed. What deterrence is, is you've got to have the capability, and you've got to demonstrate the will. And so, our NATO nations have the capability. We've got to demonstrate the will that we're going to defend every inch of NATO territory. Otherwise, every time you don't do that, you're letting Putin take another step forward to putting a wedge in there between the different nations, breaking the will of NATO, breaking the alliance apart. So we've got to maintain the alliance cohesion, and we've got to be on the same sheet of music that defending your own sovereign territory is absolutely 100% non-escalatory.

Lastly, I'll say that I think what we see here is, this is Putin's latest grasp at straws to try to change the calculus of where this fight is going, Riki. He's not doing well on the battlefield. He needs something to change the calculus.

And so trying to put a crack in NATO, trying to get NATO to do something that recharges his population, maybe gets others to help him more openly—China or others—he's going to do anything he can to try to change the balance of the equation right now because he is not winning on the battlefield. So, NATO needs to hold steady, give those front-line nations exactly what they need, give Ukraine the additional capabilities they need to defeat and deter at a low cost and affordable fashion. And then additionally, for restoring deterrence, doing things outside of the kinetic military realm, such as dealing with the Shadow Fleet, putting the sanctions on countries like China who are supporting Russia.

I think all those things will be helpful. And that's how you stop this in the long term. So, I'll turn it back over to you. Thanks.

[Riki Ellison]

All right, Corky. So just on the big principle part of what you said there, you took NATO off the hook a little bit because you can use Ukraine as a surrogate to do that response, that offensive strike back in to prevent. Shouldn't this incident hold NATO accountable for them as an organization beyond a surrogate nation to do that work, to do something that would punish Russia for doing this without going escalatory, nuclear escalatory? Or is that too much to ask? Or is it too easy just to have a surrogate Ukraine just to feed them money to do the dirty work?

[Maj Gen (Ret.) Charles Corcoran]

I think it's certainly non-escalatory to give all the NATO nations along the border what they need to sense, make sense, and act to defeat the threats as they come in. It's non-escalatory, in my opinion, to give Ukraine what they need to prevent the threats from even getting to those countries. I don't think it's escalatory to do the non-military actions I spoke of, of clamping down the Shadow Fleet, you know, maybe puts more tariffs on China doing those things. A direct strike into Russia is absolutely escalatory.

[Riki Ellison]

But what's that? Putin's going to keep pushing this, so what is that? When does that happen? When do we become somewhat escalatory, so he doesn't keep doing this? Just a question there.

[Maj Gen (Ret.) Charles Corcoran]

It's a great question. I think there are a lot of other steps you can take prior to a kinetic strike into Russia that would bring him to the table and get him to change his calculus.

[Riki Ellison]

You think the White House is going to do that?

[Maj Gen (Ret.) Charles Corcoran]

I don't know. The sanctions package from the U.S. has been sitting there ready to go for quite some time, and it hasn't been acted on. So I think, again, there are steps to take that don't require a kinetic strike against a nuclear power at this point.

[Riki Ellison]

To me, it's not a kinetic strike. It's just an escalatory, meaning to Russia, non-kinetic, and it's not the White House. Let's make it all clear. NATO is 32 nations, not the White House. So, it has to be collectively given on that. I want to ask another—

[Maj Gen (Ret.) Charles Corcoran]

The White House has options, too. Every nation has options on its own, and the U.S. is the big kid on the block that could really do some damage.

[Riki Ellison]

The next question I have to you, because you're familiar with the cost of flying these aircraft. You're familiar with what the expense is to train a pilot to put them up. It seems way over cost, on the cost curve, as we're flying F-16s and F-35s and shooting down \$10,000 drones. We only shot four or five of them down. That's frustrating to see this, because we're losing that fight. That fight is the cost curve.

[Maj Gen (Ret.) Charles Corcoran]

I think I mentioned that. It's tens of thousands, if not \$100,000 per flight hour. You can only stay airborne for an hour to an hour and a half, and you're only carrying four to eight, depending on the platform, of these half-million-dollar minimum missiles, half-million-dollar heaters, million-dollar AMRAAMs. If you're going to fly fighters, you need to get APKWS on them. A better platform, flying-wise, for the slower drones is an attack helicopter, something like that. There's a very capable laser weapon called the Apollo, built by an Australian company that has been purchased and is on contract for a NATO nation. You can shoot 10 to 50 of these drones per minute at a cost of \$1 to \$10 per round, and you've got to unload them in a magazine.

We've got to get these things fielded sooner rather than later. We're way behind the power curve there. But there are capabilities that are much, much more affordable than surface-based missiles or fighters.

[Riki Ellison]

Why aren't Poland and Romania doing what Ukraine's doing? Why aren't they doing cheap, distributable, mobile fire trucks, shooting this stuff down with \$5 bullets? Why haven't they done that? They've lost it for three years. Is it because they've got to invest? I just can't understand this. Why wouldn't you have done that?

[Maj Gen (Ret.) Charles Corcoran]

I think it's slow. They're way behind the power curve on acknowledging the threat in certain areas and being innovative. When you're under fire, you tend to go a lot faster. You could say it's criminal, whether it's the U.S. or these other nations. It's how slow we're going. If Ukraine's under fire, they're getting attacked every day. That has driven some serious innovation.

[Riki Ellison]

Okay, well hey I'm going to pass you over now to KT, but I appreciate that, Corky. I appreciate your perspective coming from a professional air fighter and with your expertise in Ukraine and the NATO.

KT, if we can get an understanding of what this actually is, you've seen these things fly every day. From your perspective, from a Ukrainian perspective, what happened here from that experience on September 10th, which is obviously not the first? KT?

[Konstantin Tymonkin]

Well, this attack was significantly different from the previous cases where drones would fly into NATO territory. In most cases, when they were skirting Romania, that was just to get a better approach path to southeastern and southwestern Ukraine. Then the lone cases where there would be one or two drones getting into Latvia or Lithuania, again, those are also doubtful because Ukrainian spoofing cannot reach this far anyway.

You can have a case...Originally, we thought that this could have been some effect of some of the Ukrainian countermeasures that would fry electronics in the drone and it would just keep flying straight, basically. However, after this attack and after analyzing the drones that we have downed over western Ukraine and found Polish and Lithuanian SIM cards in them and the SIM modules, because some of these drones are also used not as bombers, but as reconnaissance.

They have cameras and they have mobile connection and they basically use the mobile network of the country to transmit video data and their own telemetry and get additional commands. Again, I don't know about the ones that landed in Poland, but I'm pretty sure since most of them were Gerberas, which is the smaller variant of Shahed, which is normally used as a distraction for our air defenders, those things did not have an explosive payload.

So most probably, they had additional fuel tanks and some of them could have easily had also cameras and SIM modules, again, to do recon. So, Russia is definitely using the war in Ukraine as a justification, like the fact that Ukraine has some spoofing capability to try to dilute the situation, to not make it crystal clear that it is definitely a Russian, planned attack

on Polish—not attack—but a planned incursion into Polish territory. Russia loves this fog of war when you can hide things in it.

But this specific attack was crystal clear. We had 415 drones in total attacking 15 different Ukrainian regions. Most of them, about 90 percent were Shaheds, but then half of the about 40 Gerberas that were flying on that day literally just took off from Russia, flew in a straight line parallel to Ukrainian-Belorussian border, got into Poland, flew about probably 50-70 kilometers in Poland, and then started separating in different directions.

Those directions were Rzeszów, which is where J-town is, that's the main NATO base through which all the transit of military goods is coming, Warsaw, the capital, and Gdańsk, the main port on the Baltic Sea. So again, no spoofing of any kind, especially obviously since we don't have that capability in Poland, can lead to this kind of trajectories and results. So yes, it is a Russian salami tactics.

So yes, they're testing NATO's resolve. Yes, they're getting basically everybody used to the fact that these things will happen, and if NATO does not react, then they will keep doing it.

[Riki Ellison]

Hey T, can you explain what spoofing is from a Ukraine perspective, and how when you spoof a Russian drone, how far can you spoof it to or how you do that?

[Konstantin Tymonkin]

Well, in general terms, spoofing is basically tricking the GPS receiver on the drone into thinking that, basically providing it false coordinates, right? So making it think that it's not, that it's going the right way while actually sending it to a different direction. However—and Ukraine has quite significant, extensive, and pretty modern spoofing capability.

However, we only have it over Ukraine, and we don't have like the super powerful spoofing capability, like we don't have spoofing capability that emits, like that has a huge range, right? Because we don't need it. We have it locally over specific territories and places of interest and of significance.

So something like Krasukha, which is a Russian machine that when they switch it on in Russia, the airport stops in Helsinki. We don't have that kind of equipment. So our spoofing equipment only works over Ukraine.

Moreover, we can't, we don't use it even during attacks. We wouldn't be spoofing into Polish territory because that would obviously create chaos and Poland people would not be able to drive. They would be, you would switch on your GPS on your phone and you would be in somewhere in South America.

So obviously we're very good at limiting the effect of spoofing to just over Ukrainian territory. So even though we have it, but again, it's limited to just Ukraine. And obviously what happened here and the fact that they flew in a straight line without any change of trajectory all across Ukraine, and only started splitting over Poland proves that this definitely was not done by Ukraine.

Moreover, trying to single out 20 drones out of 419 over 15 regions and specifically target those and then send them in those directions. This looks like an impossible task even for a much more technologically capable nation.

[Riki Ellison]

Thank you. Thank you, KT. As Corky said, majority of these drones have to go through Ukraine. Not all of them, as you said, because some of them can fringe the border from the Danube Black Sea around. But it's obvious that you have all the data. You know exactly what these things are.

You've done it for three and a half years. You have all sorts of sensors collecting that data. Why haven't we—I probably talked to Mark—but why haven't we been able to, for Ukraine. If the West is paying so much money to defend Ukraine and give them what they want, why aren't those border countries getting that data that would help them understand what's going across into their borders that you have, because you can see into their border and pass that over to them. Why haven't we moved on this, from your perspective?

[Konstantin Tymonkin]

Well, it's a political question. I'm pretty sure Ukraine would be willing and happy to share this data. Moreover, and this is coming back to what Corky mentioned, that the best way to protect the eastern flank of NATO, at least specifically for Poland, is to actually put more defenses on the other side of the border in western Ukraine, because in that case, even the fallout of the drones that were taken down will not fall on Polish soil, which will make it way less problematic for them.

And I'm pretty sure if this, again, with all the momentum that this issue currently has, the best solution would probably be to: A) provide data sharing between Ukraine and neighbouring countries, B) provide obviously—

[Riki Ellison]

—Well why hasn't that happened? KT, it's been three years!

[Konstantin Tymonkin]

Well, there's, again, as you know, there is lack of political will, there is lack of urgency, there is lack of adaptation from countries, even like Poland, even though it's spent 93 billion euros on purchases of military equipment in the past four years. However, it is still doing everything the old way: they're buying tanks and planes and artillery, even though all of those things will be incredibly vulnerable in this modern war.

But yeah, but again, share data, make those, well, increase the sensor networks in those countries, specifically sensor networks designed for these types of threats, because again, they fly pretty well around radars, right? Like, they've trained to fly around every Ukrainian radar, including all of the Western types, right? So the radar are clearly not enough.

And we know from the situations in the Baltics, there were multiple cases where the radar networks would not see those drones. So yeah, so B) provide more sensors and increase the sensor coverage. And then C) obviously, implement new types of air defenses specifically tailored for this threat, both on Ukrainian territory—and this is in the interest of Poland to have more of this stuff in western Ukraine—so it's taken down before it crosses the border. And then obviously, on the other side as well. And in that regard, it's not just the mobile fire teams.

Now that the Shaheds are often flying high, interceptor drones have become an incredibly important part of air defenses. And I think we are taking down a couple hundred every night with interceptor drones. And those are also very cheap. And there is a US technology that is working really well in Ukraine. There are several Ukrainian companies that are doing it. And there are automated C2 systems in Ukraine in place that take data from big radar networks and acoustics, aggregate it together and then take data from tactical radars locally and literally send it over to take over control of the interceptor drone. And I mean, like a \$2,000 interceptor drone, not a \$500,000 thing, right? And it literally automatically takes control of the interceptor and just leads it all the way to the target. So all of those things already exist.

And obviously, strengthening the eastern flank of NATO with this stuff, or at least having more of that in Ukraine that will protect NATO too, would be the most reasonable solution.

[Riki Ellison]

Just for the audience, you're watching what NATO did. Maybe they did it just to show their air superiority and air power of using fighter jets to shoot down those drones. You don't do that, do you? Over in Ukraine, you can't afford to do that. How does Ukraine deal with this? So they don't—or are they using jets too to do what we just showed happen? What is your solution set for these drones?

[Konstantin Tymonkin]

We use jets a little, but only with machine guns, not with the rockets. Because again, we don't have the cheap rockets yet for that. We use helicopters. Again, we don't have enough of them. We don't have attack helicopters. We use old Soviet Mi-8 helicopters with a tiny machine gun in the front, which takes forever to take a drone out. But I know helicopter teams that have recently been able to take down up to 18 Shaheds in one night per helicopter. So that's a lot. And the cost of it was basically fuel and maintenance, plus 100 bucks worth of rounds. But decent attack helicopters with good machine guns and targeting equipment can totally do a lot of damage just using machine guns. I'm not even talking about an APCWS.

[Riki Ellison]

You have a C2 system that's able to discriminate and be efficient with using cheap stuff rather than expensive stuff. Is that correct?

[Konstantin Tymonkin]

Yes—

[Riki Ellison]

You have an open architecture or closed architecture to bring all this stuff in, information in. Is that correct?

[Konstantin Tymonkin]

Yes, and most importantly, we have battle management systems that take information from all sensors. They know and they're connected to all these small effectors, not to the big stuff, but to every single little interceptor drone team, of which there are hundreds across the land and thousands of mobile fire teams. And it integrates all of that incredibly cost-efficiently and allows commanders to literally allocate targets to specific effectors and then guide those effectors to the target. And that's purely IT product.

[Riki Ellison]

KT, I assume that's a cloud, right? You're using cloud-based solution for that.

[Konstantin Tymonkin]

Yes.

[Riki Ellison]

Let me, last question, because I got to get Mark out of here. What's the problem here? We know, we must know NATO's over there watching this, studying this. We're over there. Why haven't we, from your perspective, been able to take and duplicate exactly what you guys are doing and putting it on NATO territory? What's from your perspective, from a Ukrainian perspective? Is it because you guys got dirty data? We don't trust your data. We don't trust your stuff. What is it?

[Konstantin Tymonkin]

Again, you have legacy military-industry complex that obviously wants to keep selling what they were selling and doing it the way they were doing it. And until they're forced to change their ways, they will keep doing it the old way, which is slow and inefficient and totally unsuitable for the continuously changing environment of this war. There is political inertia because obviously even now when most of the warfighters understand it, the politicians don't—

[Riki Ellison]

But KT, hey, forget about that. We've got war fighters, we've got soldiers over there watching this, testbed, right? Forget about the politicians and the defense industry. We've got our people over there studying this. What else is there? Anything else besides what you just said is preventing this technology, this way of fighting to your border NATO nations?

[Konstantin Tymonkin]

Well, to some extent, again, there is the societal thing. Like you have to, in a peaceful country defended by NATO, you suddenly have to tell your people that we are suddenly in danger and we need to start doing things, right? And that is a tough decision to make.

The Baltics are ready now. And I very much hope that what happened on September 10th was a wake-up call for the Poles as well, because obviously the Suwałki Corridor is definitely a place of significant interest for Russia. And maybe it's not the first on the list of places they would attack in NATO. The first would be Narva, Estonia, but it's definitely in the top three. So yeah, and obviously the Russians will be doing more of this stuff going forward. So again, we hope that there was societal need that turns into political will, that turns into missions.

[Riki Ellison]

Thank you, KT. Appreciate your insight. Okay, Mark, from a strategic viewpoint, it's all yours, sir.

[Rear Admiral (Ret.) Mark Montgomery]

All right. Thanks. So first I want to go back to the Russian action. Look, I actually don't think it's not a cost imposition attack to the degree that, I mean, it was purely, it was performative in the sense that they wanted to demonstrate the lack of NATO credibility in countering integrated air missile defense challenges. I think they did a perfectly good job of showing that. I mean, we didn't get everything we should have got, got things with disproportionate weapon systems.

I mean, we did everything except like have a Patriot shoot down a F-35. I'm glad it didn't happen. But this was an effort that, Russia does this all the time. Russia works to undermine NATO credibility, whether it's in the Balkans, the Baltics, or Ukraine. It's a constant pressure campaign. And that's what this is part of.

So first, you need to understand that's what this was. This was in no way an attack on Poland in the sense of I'm going to cause damage. It was, the damage it was trying to cause was to NATO credibility, which is why it's important that, as you mentioned, SACEUR and SACGEN came out right away with strong statements.

Secretary Rutte and General Grynkewich did a great job doing that. And that was good. It would have been better if our President, our SecDef and our Chairman had come out with the kind of strong statements immediately.

And we do ourselves no service to give a soft touch to Putin and Russia on this. When Russia misbehaves, the President would be well served to hold him accountable, to hold Putin accountable. And it's shameful that we don't do that immediately.

And they really, this was a strong signal that you can't separate, as we learn from it now, it's over. As we learn from it, you can't separate Ukrainian integrated air missile defense from Eastern European integrated air missile defense. In other words, if Corky were on, he would tell you the best place to intercept these drones is somewhere over Belarus or Ukraine, not over Poland, if you're the Polish Air Force or integrated air missile defenders. So we got to think more and more about that. We consider Ukraine a no fly zone for our own aircraft, our own military aircraft in NATO right now. And we need to rethink that.

And so first is start to think about what integrated air missile defense really looks like. And that means we need to, in NATO, as you and I have been arguing for three or four years with Tom Goffus as the Assistant Secretary General and others, that we need cost effective integrated air missile defense on the Eastern flank. That means, as Corky mentioned, F-16s and potentially F-35s, but really F-16s and F-15s carrying advanced, persistent kill weapons: the 2.75 inch rocket laser guided, I think a seven per barrel and up to six barrels on an F-16, that's 42 engagements. Corky went through the numbers on this, but lots of those. Now look, we bought...Ukraine's been using them from a ground launch variant and could use them from the F-16s with some work. And they were being ordered and sent to Ukraine, and the Undersecretary of Defense diverted them to the Middle East for use with our F-15 squadrons, as Corky mentioned. I think they over-diverted. I mean, I think the number was 20,000. That's what I read in the press.

Probably we could have sent some, I mean, Iran doesn't have 20,000 Shahed drones to launch at US forces or Israel, but we could have let some still go to Ukraine, but we didn't. We need to get the production going at a rapid pace, and 2.75 inch rockets are not hard. And so we need to get moving on that so that we can provide them to Ukraine and to our Eastern European allies. In addition to what the US Air Force needs in Central Command, Pacific Command, and the homeland.

So you need F-16s, F-35s, the right weapon systems. You know, they surged the NATO AWACS, that's fine. That helps.

That helps because you want to make your pilots as efficient as possible in this kind of game. Shooting down 42 drones in a 90-minute or two-hour flight is exceptionally challenging. And

the only way you can do it is if you're really well controlled and made for maximum efficiency.

Plus, if you have large raids coming in, you know, it's helpful. You know, it's helpful for management. It assists the pilot in large force management.

We also need to get MANPADS, manned portable air defense systems, historically known as Stingers. We stopped building Stingers 18 years ago. As many people know, we've restarted the line.

I saw the first procurements, and they sure look like they cost between \$300,000 and \$500,000 apiece. So I would put Stinger in the list of stuff that ain't cheap. And I could use a different "S word" than stuff, you know, that we really need to get this, we need to get the cost per intercept down.

And then, so number one is get that NATO cost-effective integrated missile defense in place. That didn't involve any US weapon systems, operational forces, but it does involve the US defense industrial base. So we need to be very helpful with this.

The second is we absolutely, and Corky mentioned this, we have to get offensive capabilities to Ukraine, both air-launched and ground-launched. We need to transfer them a lot of our remaining ATACMs. These are excess, right? We're at the point where we're shifting the precision strike missile from the ATACMs, Block 1, Block 1A.

So we really should be transferring the ATACMs, Block 1, Block 1A to Ukraine, giving them to them without restrictions. These things aren't going to hit Moscow. We don't have to worry about that.

They're going to hit Russian forces maneuvering in far Eastern Ukraine and potentially Belarus or Russia right along the border. That's their max range on these. But they'll do a great job in breaking up future Russian offenses and the integration of the Russian forces.

And the other one is the ERAM, the extended, the small cruise missile. Now this missile was developed with Ukraine in mind, starting in late 2022, fantastic job by the Air Force, getting this thing through the Gordian knot of procurement and out for delivery in 2020, late 2025, early 2026. I think there's about 3,300 or so on order for Ukraine, about \$800 million worth of equipment paid for by Norway, Denmark, maybe the UK, but three countries plus the United States helping a little bit.

So we got to push that out. And then so get offensive capabilities, right? And then finally, and I've mentioned this before, we do need sanctions.

And the president's Truth Social was a confusing post because he asked NATO to do sanctions. As we all know, NATO is a security organization, the European Union would handle sanctions and or a direction to all members not to import any Russian oil. And so the president's hinged his, he's three months into his two week warning to Putin.

Three months ago, he said, "I'm gonna give him two more weeks." And we're three months into that now. Ricky, this is like watching Ifpik, it's two years away from being two years away.

Trump and sanctions on Russia are always two weeks away from being two weeks away. And then he gives this kind of unusual Truth Social that doesn't quite put it right. But the right move is to put sanctions on China, and India and Turkey, the three preponderant, almost all the receivers of shadow fleet oil and natural gas from Russia, until they stop receiving it.

And China and India are far and away the greatest receivers of these ill-gotten fossil fuels, and he needs to sanction them heavily. But he's predicated on a nearly impossible NATO order. So I don't know what's going to happen there.

I suspect we're just gonna say "two weeks away from two weeks away." And for whatever reason that no one can really know, the president does not really want to pressure Putin, because he hasn't, and it's been going on for six months. So Riki, in my mind, that's what we learned from the attack.

It was about NATO credibility. NATO needs to get its integrated air missile defense on the eastern flank right. It needs to get offensive and defensive weapons into Ukraine, and it needs to do sanctions.

Thanks.

[Riki Ellison]

Hey, Mark. It would be difficult, obviously, Turkey's a NATO country, so it'd be difficult to sanction, I think, Turkey. But let me just go back to a bigger argument in the beginning from your perspective.

What can NATO do to show its resolve without using Ukraine as an ability to strike back? Don't we have to show a resolve to start a deterrent with Russia? Or is that, as you said in the beginning, that's not going to stop Russia.

What's going to stop Russia? Article 5 is not going to stop them, a nuclear weapon. I mean, we're in a position where they're using it, and we have nothing to stop them from doing it.

It doesn't look like it. What, from your mind, needs to happen?

[Rear Admiral (Ret.) Mark Montgomery]

We can sanction Turkey. We just put tariffs on all of NATO, in one fell swoop, so we can. So that's what I would do.

Look, I think we're at the point, this was not, I think, that's why I'm saying... I obviously don't like Russia. I don't like Putin.

But I recognize this was not an Article 5 attack. This was a NATO credibility attack. And I think the right response is for all of NATO to saddle up and participate with the United States in a proper arming of Ukraine, the right weapons systems, offensive defense, and for the EU and the United States to get their act together and properly stop buying any Russian fuel, which is what the president wants Turkey and Hungary and Slovakia to do, the three doing it. He says, if that happens, he'll do the sanctioning on China and India.

Okay. That's what we need to do. And so from my mind, that's how you respond to this.

That will break the Russian war machine, which is 40% of the Russian federal budget, which gets 40% of its money from these fossil fuel sales. So if you cut off the fossil fuel sales, Putin

will have to decide, does he want to fight the war, or does he want to buy off his base with payments? That's what he does with the other 60% of his federal money.

I call them payments to babushkas, but you want to give him a wicked challenge. And the way you do that is an effective sanctions regime.

[Riki Ellison]

Mark, you've been part of this with us, the Eastern Flank Deterrent Line. This is in case sanctions don't work. You actually have to have a defensive capability to know exactly what's coming on your border. At a low level, I got the radars, everybody's got radars, they can see it, but anything below 1,000 feet, there are problems.

And fiber optic drones and so forth. So we put forward with Tom, us, May 9th, in Poland, to create a data backbone, basically, with open architecture, with cloud. So each of these different nations can share and get shared, starting with the lowest common denominator, unclassified data or dirty data to do that.

That is what Eastern Flank is going to do. And they're starting it in the Baltic states first, and they're going to work it all the way down to have, you start with some golden eggs, but the golden goose is the data share, which we seem to struggle with. If you can comment on that, but why haven't these nations done this?

Why haven't they copied, like I talked to KT and Perky, when they've been sitting next door to this fight, and they're reliant on NATO Article 5, which doesn't work. So just if you can summarize some of that.

[Rear Admiral (Ret.) Mark Montgomery]

Stretch yourself back to 2014. Everyone in Europe was up in arms over the illegal annexation of Crimea and the grabbing of portions of Donbass. And that collective angst raised overall defense spending in NATO from 1.6% to 1.8%. It takes a lot to convince these. Even the February 2022 invasion, well, it convinced the Baltics and Poland, who were already working it, to accelerate even faster to get to 4% and eventually 5%. That's a small portion of Europe's GDP that recognizes the threat and is building towards it. Romania and a few other countries, but really the Baltics, the three Baltics and Poland.

The vast majority of the GDP for Europe is in the UK, Germany, France, Italy, Spain, and that is still just a smidgen over 2% going down to about 1.5% from one of the countries. So that's a stark reminder that they are not that motivated. The UK has a percentage of GDP at about one third the level they had during the Cold War.

So they obviously don't, they're not making the proper investments. So yes, they have to. And if they do, then a lot of these things will become easier to procure.

Germany is increasing its spending, but it's still, I think it's going to maybe 2.3%. This is well below where you need to be, which we all recognize is 3.5% minimum on defense, 5% in defense-related objects.

[Riki Ellison]

But Mark, aren't they spending the money on exquisite, expensive systems or legacy systems and not looking at innovation that's going on? That's the revolution. We're in a revolution.

We're in an unmanned versus unmanned revolution. And I think we're losing that fight because of the cost curve of it. We're still back in old technology.

How does that broker? When does anybody wake up around here besides Ukraine that we have to shift the way we fight and how we procure?

[Rear Admiral (Ret.) Mark Montgomery]

Yes, the majority of it is on high-end systems that have a high cost and you'd call legacy, but the ones that are available. And one thing I'd say is that's an available system. I'd love to be able to spend money on Stinger 2, but it doesn't exist in a usable fashion right now.

And there's a bunch of other weapons systems like that. But yes, we do need to drive down the cost of intercept and in doing so, then drive down the procurement costs overall and then get the defense budget focused on the right things.

But you're right. We're not perfect.

[Riki Ellison]

But is this going to change what happened on the 10th with Russia? Is this going to change anything or are they just going to normalize this? We got over the damn turning point and yet we still got to keep climbing to get to a turning point.

[Rear Admiral (Ret.) Mark Montgomery]

Yes, I'm not sure it'll change [such that] NATO suddenly does procurement properly or the US does procurement properly. I do think NATO recognizes it for what it was: a challenge to their credibility.

So they're going to work this Eastern Flank defense initiative pretty aggressively. I hope it also leads to some forward thinking on what type of sensors they need, the mix of low cost sensors with more traditional radars, what kind of shooters, weapon systems they need, try to find a low cost version of the rocket system or a counter drone, a drone that goes after a drone system.

[Riki Ellison]

What about the cloud? What about the cloud, about sharing? How do we get that thing done?

[Rear Admiral (Ret.) Mark Montgomery]

I should have said pretty early on that part of the systems that have to get right is what Mike Guetlein would say, was "before everything else, get your command and control right." So you're absolutely right.

How you bring this data together in a way that's easily exchangeable is going to involve integrating with some cloud and other sensor providers, where you actually anchor the command and control network, for that will matter as well. And that's going to have to exist largely, a lot of it's sensor movement, a data movement in the cloud. So I agree.

But in general, we need to drive down the, we know this, we need to drive down the cost of intercept, drive up the amount of munitions and the readiness of our forces.

[Riki Ellison]

Mark, I think it's about time, but if you've got one or two questions that are pressing, please, please.

[Rear Admiral (Ret.) Mark Montgomery]

So Ricky, in here, the only questions are the ones you just asked. So someone's as smart as you. So what I want to do is pass it back to see if KT, give it to you to pass around to KT and yourself for any final thoughts.

[Riki Ellison]

Okay, let's go, KT, any final thoughts?

[Konstantin Tymonkin]

Well, again, hopefully Poland and in general, NATO will now start looking into specifically this type of threat as something that is definitely not a future threat, but something that can happen tomorrow, which means they will have to consider other options for both detection and engagement. Additionally, again, Ukraine has been very vocal about what it does to a select number of allied nations, but we are always showing everything we're doing and we're happy to demonstrate and share the technology and the methodology of how we apply it with our allies. So this is an ongoing process.

So at the level of military representatives and anyone who really wants to come and who has the clearance to be part of it, that has been going and it is going now. So as long as there will be more political will to start for these ideas to proliferate and to turn information that is currently just piling up in some folder into actual missions, hopefully that will dramatically increase the ability of NATO to defend itself from these kinds of threats. And again, if you're not preparing, like this is the new war, this is how it looks now, it will get even worse.

So if you're trying to fight the old war, there is no point of even buying any equipment at all. You have to start prepping for the new war. So again, and we're never happy with whenever this war crosses over to neighboring countries, but maybe it's a good wake up call.

And hopefully that would be something that will create the political will to start implementing change. So again, let's see something good in it.

[Rear Admiral (Ret.) Mark Montgomery]

Thank you, KT. Mark? No, I just wrapped with my piece.

I'd say, look, the level, this should, I agree, be a bit of a wake up call. But it's a wake up call about the credibility of integrated air missile defense in the NATO Alliance. And you're right to say it's been an obvious exposure for a long period of time.

But I have to say, I've never quite understood why Putin would do things like this. It alerts us to our failings and vulnerabilities. In theory, this should be helpful.

In practice, the Eastern European countries are going to take this very seriously. The Western European countries are going to rant for two to three weeks and then go back to their normal way of doing business. I'll believe it when I see it.

When the Germans get to 3% of the GDP on defense, I'll whistle a new tune. But until then, I think we got a while to go. Same with the UK and France.

[Riki Ellison]

Thanks, Mark.

From my perspective, I think this is the turning point. I think we've already recognized that that Eastern Flank Deterrent Line, led by C.D. Donahue, by Heinz, Bigby, by Tom Goffus, by the coalition of the willing, which are those Eastern Front countries that have the most to lose. What happened, I believe, is the tipping point.

They've got the mechanism with the Eastern Flank Deterrent Line to lay this down. It could be done by November, December. They could lay this thing down.

It's cheap, distributable. That's there. I think those countries have to do it, be part of it, and then to have the French come in as the Supreme Allied Commander, the COCOM, saying "this is the mission, and we're going to integrate, and we're going to add to our invincible, superior, dominant air power."

The lower end of it is what we have to do. And like you said, Mark, the credibility is gone. They have to do this to be credible, to be credible at all as a NATO organization, and to Russia.

So I think this is the tipping point. They're going to go forward with it, and everybody's going to benefit from that. So that's where it's going to go.

I think the cloud, the open architecture, not at the secret level, right now at the unclass level to build the trust between different nations. We can't fight Russia by ourselves, and we have to share data with other nations. We're not doing that.

And we got to take whatever the heck Ukraine's stored up for three and a half years of data of everything flying in their airspace, and that has to be given to our countries, to NATO, to be able to fight this fight, to be able to not have a World War. That's where we're at. And I thank you for contributing to this conversation and this discussion.

Timing's everything. There is momentum. There's energy. There's leadership. There's political will. There's money.

It's all there. So I think we're at a different stage than we've ever been with integrated air and missile defense in Europe, ever. So that's where I'm at.

So thank you. Thanks for the discussion today, gentlemen. I appreciate it, ladies and gentlemen.

Thank you for listening.