Virtual CRT Air Force and the Golden Dome

[Mr. Riki Ellison]
Good morning, ladies and gentlemen, from a very muggy, hot, humid day here in Alexandria, Virginia. I am Riki Ellison. I am your host today. I am the founder and chairman of the Missile Defense Advocacy Alliance. We have one sole purpose of making our world and our nation a safer place through the deployment, the evolution, and development of missile defenses. This is our 81st virtual here, and it's on the Air Force in the Golden Dome.

We have, over the previous two or three weeks, have focused on the service's contributions to the Golden Dome. We did a virtual with the Army to begin this. We did one with the Navy in the Golden Dome about a week ago, and we are now going to look to the Air Force and what their role is and have a great discussion on what they can and can't do or what is the best that we think they could provide to this overall architecture that's going to go forward on that.

I've just come from 40 miles from the Russian border in Poland at a training site and also the same trip over in Honolulu, Hawaii, meeting with INDOPACOM. So, there's been great perspectives from our component commands outside of the United States and how they want to contribute to the Golden Dome and how the Golden Dome can contribute to them. We have a great panel today.

I do want to mention that our guest that we announced, Guastella, is unable to make the broadcast today. So, we've got one of our great wingmen, one of my favorite wingmen of all time, Charles Corcoran, is going to participate on behalf of him. We have three stunning, powerful guests here today, starting off with the previous NORTHCOM commander, Glen VanHerck.

And Glen is responsible, from my perspective, of really shaping the requirements and the push to get a Golden Dome as an executive order. His advocacy while he was in command to understand the command and control aspect of the Golden Dome and the lack of it and to be pushing as hard as he did, this is a result of that. So, it's going to be great to get a reflection from a NORTHCOM combatant commander. And by the way, that is the number one command for Golden Dome, obviously, and that is where Mike Guetlein first visited once he got confirmed. He went right to Guillot, to NORTHCOM, to discuss that. That is the customer.

So, we're going to have a great perspective from Glen on this and obviously the role of the Air Force. We have Corky, who has had, I think, 450 combat hours in the F-15 and F-22. So, he's done air-to-air combat. He was the deputy commander for Air Force Ops, so he understands this mission clearly. His expertise has been all over the world. He has been in Israel many times during the fights that we've seen, air-to-air fights, taking out cruise missiles. Corkys been there in Israel. He's been there in Ukraine on their air-to-air capabilities. So, his expertise will be phenomenal.

And then we have Mark Montgomery. And Mark, of all of us, it's 1 a.m. in Taiwan. Mark's in Taiwan tonight, participating in this discussion. And Mark's well aware of the Air and U.S. Air Force from his days on the Hill, from his expertise in the Pacific, in Taiwan, with the Navy aspects to it. So, I think this is a great discussion, and it's an education. And it's an education

of what Air Force can do, what they can't do, and how maybe they should fit in the architecture, if the architecture, because we have to have cruise missile defense.

And just to start it off, it is a daunting problem to cover the airspace of this continent against cruise missile defense. Just ridiculous. So, this needs to be scoped the best we can. So, with that, I would like to—and I'm going to give Glen a few—he is a Kansas City Chief fan, big time. So, I'm going to give him that credit for that. He's given us a call from Missouri. So, welcome to the broadcast today, Glen.

[General (Retired) Glen VanHerck]
Hey, thanks, Riki. I appreciate the call out of the Chiefs there. I was actually a Rams fan before they left us, closer to St. Louis, but now I'm rooting for the Chiefs, for sure. Hey, I'm just going to start off a little bit about the why. You know, why do we need a Golden Dome? And I saw my job, and I think the job of the department is to give our National Command Authority, the President, options to keep our homeland safe, secure, and prosperous, just like it is every day.

As our time has changed, the threats to our homeland have vastly changed. And today, we don't have a lot of options to give the President. The number one option, which is the foundation of homeland defense, is nuclear deterrence. But you don't want to have that as your primary sole kind of option to give the President. So, that leaves us with a gap below that, that is being exploited today with multiple threats that can attack and generate effects on our homeland. And I think that's important.

I would point out that to build a realistic plan resource, you need to understand what you're going to defend. And I think it's unrealistic to defend every square inch. Certainly, these are policy decisions. But ultimately, what you defend from who, from what specific threats, is going to lay out the architecture for Golden Dome. So, policy needs to be addressed right up front. I think it's important to lay the foundation of what threats are out there, because I believe there's many people that think the Golden Dome is all about the space-based capability, space-based layer, or threats emanating from space.

But the threats to our homeland go from space to undersea and everything in between. So, ballistic missiles launched off traditional intercontinental ballistic missile platform, they could come off of a fractional orbital bombardment capability, something orbiting in space. We've seen the Chinese demonstrate that capability.

And of course, there's theater, air-launched capabilities off of bombers, other platforms, land-based mobile platforms, sea-based, subsea-based, and then space. And then the one I'll throw in last would be asymmetric, and kind of what you saw the Ukrainians do with the Russians recently. And that could be a container ship parked in a key port, or it could be a 18-wheeler in the middle of Kansas wheat fields that comes out of a barn.

But we need to think about the threat to our homeland because that'll shape the architecture for Golden Dome as we go forward. And those are key policy decisions. So, ballistic capabilities, we talked about those. I'd point out the hypersonic capabilities. And the primary difference between a ballistic missile and a hypersonic is the area that they fly in. So, a hypersonic can emanate from space, but once it gets into the atmosphere, the primary difference is it's a maneuvering platform.

It flies below and maneuvers around existing threat capabilities. And that's a challenge for us today, something that during my time as a commander, a policy did not have us defending from hypersonics, and the president has changed that policy today where General Guillot is required to defend from hypersonic threats. Cruise missiles, we have been required to defend from cruise missiles for a long time.

Cruise missiles certainly can come from all of those platforms I talked about from air, space, land, not necessarily space, but maritime, subsea, etc. And then drones, and I would lump UAS into drones. But when I talk about drones, I find a lot of people think of the group one and two drones that are commercially available, which have been used very effectively in Ukraine, and we saw the Ukrainians use them in Russia.

But I'm talking about military category drones as well that can fly thousands of miles from South America to North America, for example. And these are significant threats that we need to account for. And I primarily see the Air Force's role being in that lane, and we'll talk a little bit more about that.

I do want to talk about effectors, kinetic effectors. Certainly, we can talk about up front, endo-atmospheric, and exo, in the atmosphere and outside, so space-based capabilities. Our current ground-based midcourse defense system, THAAD and SM-3 are all exo-atmospheric capabilities that go up into space from land, from the air into space. And it's truly rocket science to go after the warhead. But there's also the talk about space-based effectors. And I think we do need to have a discussion about space-based effectors.

And that's a technology that still needs to be fleshed out in my mind today. The others that I talked about are capabilities that exist today, can produce us a nascent capability in the next three, three and a half years, and put us in a position where we do have deterrence by denial while we further develop the space-based effectors. And then there's the endo-atmospheric Patriot and SM-6 series to go after ballistic missiles, hypersonic missiles.

We have shown that hypersonic missiles, we do have the capability to take them down, and you can take out cruise missiles as well as drones. But that doesn't put us on the right side of the cost curve when you're using multi, multi-million dollar missiles to go after several thousand dollar capabilities. So I see this is where the Air Force also has a role to play.

I would think about the Golden Dome from a multi-layer, multi-domain aspect. And so because one threat may emanate from a specific domain, say space or air, that should not mean we think of the effector coming from the same domain. And so you may have an air-based threat that has a space-based effector that negates that threat or vice versa.

And that's what's going to be crucial to getting the command and control right and the other agencies involved. So I see a multi-layer architecture, not only for sensing, but for generating effects. And the primary thing to me is the domain awareness to be able to see and be able to react. If you can't see it, you certainly can't deter and defeat it. And so that's crucial. We must generate effects from space, air, land, sea, subsea, and that requires across all services.

And I would say outside of DOD, it also requires other agencies who provide domain awareness and have capabilities such as the Coast Guard as part of the Department of Homeland Security, for drones especially and potentially counter UAS, other agencies, which would include Justice, but we'd also have Capitol Police, Secret Service, and many others. And I can see our allies and partners. I think the characteristics of Golden Dome are agile, flexible, mobile, affordable, rapid response across all domains, data-centric info sharing.

If you get all those, I think you get it right. That does not mean we need capabilities fielded on every street corner 24 hours a day. We need to have flexible response options where we can move capability in the time of need and more importantly, campaign with that capability on a day-to-day basis to demonstrate our readiness, responsiveness, our resiliency.

And ultimately, this is all about strategic deterrence and that deterrence by denial piece, which makes any potential adversary look and question, can we be successful in any attack, whether that's a small attack or a large attack? And if it's a large attack, they know what's coming back. It's a nuclear force that's so ready and responsive that now we've generated deterrence in the first place. And I think that's the key thing about Golden Dome. It's part of the broader strategic deterrence discussion. So we've all talked about, we've talked about effectors so far.

I think some of those effectors, Riki, need to get further left and early in the launch phase, non-kinetic, potentially kinetic, but even before the launch phase through supply chain interdiction and enabling options for forward combatant commanders looking at their responsibility to defend the homeland and our allies and partners forward. And this is where the Air Force has a role as well, is forward defense, generating those effects forward. So this is clearly a joint mission.

And I think the key layer is going to be that data layer that we talked about. I see all services having a role and domain awareness is the first one, but I think the Air Force's key role is going to be in the drone, cruise missile, command and control, air battle management, and integrated air and missile defense capabilities where they provide rapid, flexible, agile, responsible for areas that maybe you don't have that other missile effector, if you will, or capability where the Air Force can rapidly respond throughout North America or forward to generate the effects forward with another combatant commander before it becomes a threat to our homeland. I think the Air Force actually helps us get on the right side of the cost curve as well.

We don't want to be putting Patriots and THAAD and SM-3s and 6s out after low cost drones and capability when you can do that with much more cost effective, non-kinetic effects and low cost other missiles. Now, finally, let me just talk about safety in the homeland and policy in the homeland. Certainly a different challenge than what we've seen overseas. And the use of large missiles and capabilities in the homeland does give us the concern about potentially collateral damage of facilities and people in our homeland. And this has to be part of the discussion and the policy and the risk of Golden Dome as we move forward. I do think the Air Force offers a surgical opportunity here more than oftentimes larger missiles, whether they're coming off of land or maritime platforms.

It's just something to think about. Finally, the foundation of Golden Dome is going to be the data layer and the command and control. And every service and multiple agencies are going to have a role here.

Certainly the Air Force's C2 architecture will be piping domain awareness from multiple platforms, including fighters, command and control platforms, and sensors around the globe into an architecture that enables Golden Dome to do what it needs to do. And so, I see multiple roles and responsibilities for the Air Force. And I'll pause there.

[Mr. Riki Ellison]
Thank you. Thank you, Glen. Well done. Well orchestrated. Going back to your point of left of launch and the Air Force's obvious role, as we saw the B2s, we've seen recent battles that have incorporated that left of launch with their counter defense to be able to handle that. And that Air Force role is prominent in that strategy.

And so, you're saying that that is going to be one of the four barriers of our strategies to have that mixed with the Air Force to be able to strike and left of launch along with defensive airspace. And if we go back to the history of the Air Force and all the money that we've invested in their ability to study that airspace, that, as you said, does that go now to from hypersonics is at the top ceiling of that Air Force expertise, because above it would be space. And we would take it all the way down to class three.

And I believe it's class three, not below class three, that the Golden Dome has, you're going to push the other class, the twos and ones down lower. But the class three is the one, as we know, is the Shahad that's causing the most damage on that. So, does our Air Force Material Command have all this expertise and research that can be applied to helping Mike get the best stuff we can get out of that?

And that includes the near space part of it, which I don't think anybody really wants to address with the balloons and that hypersonic space on it. And then I'm just throwing this out there. So, where does MDA fit in? Is MDA supposed to do this part of it? Or they obviously do the space part of the interceptors, but it seems to be a huge gap here on research and development to do anti-air defense in that domain, unless the Air Force does that. But I sort of just gave you a lot there, but those are kind of my free thoughts on that, Glen.

[General (Retired) Glen VanHerck]
Yeah. So, first on the group one and two UAS, I would tell you, you can't tell the difference on a radar through domain awareness between a group one, two, three drone for the most part. So, you can say that you don't have responsibility for group one and two, but in the end, I felt as the NORAD commander, if it was demonstrating hostile intent or hostile act irrelevant of how much it weighed, I had an obligation and responsibility to defend against that.

And so, from a perspective of domain awareness, I don't think you can eliminate group one and two UAS and say, we're only going to solely focus on group three, because I can't tell the difference between 57 pounds and 56 pounds.

[Mr. Riki Ellison]

But Glen, I was just saying that for the Golden Dome scope, because you can't scope the... I mean, you're just trying to limit the Golden Dome. That's the NORAD commanders, but that's like doing boost phase all the way down to the bottom. We're trying to make the scope reasonable for Golden Dome instead of the whole thing. Does that make sense or no?

[General (Retired) Glen VanHerck]
Yeah. But what I'm telling you is, Riki, is I can't tell the difference between 57 pounds and 56 pounds. So, when you develop capabilities for domain awareness, you want to develop them for everything that they can see. Don't leave it on the cutting room floor and then utilize the multiple agencies and capabilities to generate effects. In the end, ultimately, this is about being able to have command and control that enables effectiveness across all agencies responsible. I don't want or think it's appropriate to be able to say, that's not my responsibility.

What we ought to do is make sure everybody has the domain awareness and a capability, share that and decide from a command and control perspective, who's in the best position to generate an effect on whatever threat it may be. I think that's the first one. As far as your question on MDA, I see MDA playing a crucial integrator role, especially for existing and to be fielded capabilities with the broader architecture of Golden Dome.

So, today's GMD, the missiles in Alaska and Vandenberg that go after ballistic missiles today and the next generation interceptor, as well as stitching together the potential for SM-3 architecture, whether it's a land-based or something to be developed, they have the capability to do that. I think they're postured well to do that also. We'll see where it goes, but every service, MDA, multiple agencies are going to be part of Golden Dome.

I would add to the threat in the homeland, another role, what we saw Ukraine do with their 18-wheelers as they marched them across Russia and struck their strategic assets, that's crucial to share information across homeland security, FBI, other agencies. I would tell you Air Force OSI, Army CID, Navy NCIS will have a role in that to protect critical infrastructure across our nation. And we need to think about that as part of our multi-layered defense of our homeland.

It's not just about a ballistic missile flying through space. That ballistic missile could come off of a container parked in a port or an 18-wheeler in the middle of the country, and we need to think about the problem set. Now, ultimately, there may be policy decisions made to eliminate some of that for cost or other purposes. I'm okay with that, but we ought to have the decision up front and ensure everybody understands the playing field, the threats to our homeland, and if they're going to take something off the table, they assume that risk.

[Mr. Riki Ellison]
Thank you, Glen. Okay, we're going to turn it over to our wingman, Charles Corcoran. Corky, you have the floor.

[Major General (Retired) Charles "Corky" Corcoran]
Great. Thanks, Riki. Appreciate you hosting, as usual, and all MDAA does. Good to see my friends, General VanHerck and Admiral Montgomery here today. More importantly, it's great to see our nation finally start to get serious about homeland defense. I know General VanHerck would have loved this level of attention when he was a NORTHCOM commander.

The number one mission, the number one objective of every combatant commander across the globe, first and foremost, is to defend the U.S. homeland. So, it's not just the NORTHCOM commander's job, it's every combatant commander's job. And I think, and we're going to focus on the Golden Dome here, but General VanHerck mentioned it, that deterrence forward is a big deal.

Working with allies and partners to sort of suppress or highlight to the would-be threats that we have, both the capability and the will to not only defeat any threat they throw our way, but to punish them should they throw it our way. So, that is hugely important to making the Golden Dome ultimately succeed. And as General VanHerck just mentioned, it's internal and external.

I think we're, even at the President's level, we're overly focused on this dome and things not penetrating the dome, but I'm just as concerned with the threat that's already inside or under the dome. And we need to be ready to deal with that. It all starts with the same basics that we've discussed many, many times here.

You've got to be able to sense and make sense and act. And that is an all-hands-on-deck problem. We're trying to focus on the Air Force here today a little bit, but it requires all capabilities to be brought to bear across the Joint Force and the interagency, as General VanHerck just said.

You know, there's a whole separate effort, parallel, I'll say. I'll say parallel, as in they're never going to touch unless somebody actually takes action, but there's a big parallel, huge money effort going on with redesigning the National Airspace System. A lot of money going into that. You know, I can't even remember how many lines of effort. So, that's all about understanding, sensing, and making sense of what's going on in our airspace. Can you really tell me with a straight face that shouldn't be part of Golden Dome?

I mean, that's what we're trying to do, is understand what is in the air across the U.S. airspace, and that's got to extend out well beyond the airspace so you know what's coming towards the airspace. So, I think it should be a big push right now to make sure that we merge those efforts and we design a new National Airspace System that also affords the NORTHCOM commander and other agencies that are part of the, that have the authority to do so, to defend the airspace. So, you know what's in the air, whether it's friendly or not. If it's not friendly, you've got to identify it, and then you've got to decide how you're going to deal with it. So, I think we've got to get after that.

Speaking of the interagency and the authorities, I was recently at NORTHCOM, and I guess nobody on the call knows this better than General VanHerck, but the ultimate C2 of this, and what authorities is the combatant commander charged with defending the homeland even going to have when we get all this in place? The small UAS problem right now, for example, if you sit and talk to NORTHCOM folks, I was with the J3 recently, and we're talking about defending military bases against small UAS. That's a service responsibility. That's not even NORTHCOM commander's responsibility right now. So, the NORTHCOM commander is going to get shouted at by the president or somebody if a base gets attacked, but at the end of the day, if it's an Army base, the Army's responsible, the Air Force base, the Air Force is

responsible. Are we going to address that? Are we going to give the NORTHCOM commander the authority?

Should we give the NORTHCOM commander the authorities? If he's going to have the responsibility, he probably needs the authorities to get after the problem set. Zeroing in a little bit more on the Air Force specifically, I think General VanHerck hit it well. I'm not surprised as a retired airman, but the things the Air Force brings to the fight in missile defense, integrated air missile defense at large, number one is the C2 structure from the Joint Force Air Commander on down, and then a few of the key capabilities. So, we've got to leverage, I think, going forward the existing C2 structure that we see work across the globe in our various COCOMs, and so how are we going to feed in all the golden dome capabilities into an existing JFAC structure that is utilized by the combatant commander, NORTHCOM commander, in conjunction with the interagency to defend the homeland from the various threats we talked about. And then the Air Force specific capabilities that feed into that from both the sensing and then the kinetic capabilities.

From the sensing capability, the biggest thing the Air Force brings in is expeditionary. It's the agile, responsive, flexible. I guess not only just the sensing, but the shooters as well.

And so, I think that's a good way to scope it. Like General VanHerck said, agile, responsive, flexible, which I'm going to throw a spear here, but how in the world can the Air Force decide it's not going to spend money on the E7? If it's going to shift over to the E2, then you better get the capability ASAP and you better get enough capacity in that capability set because the Air Force has got to have the ability to get sensors airborne at a moment's notice, at a time and place they're choosing, to augment, to supplement the surface-based sensors that we have on both ships owned by the Navy, on land owned largely by the Army, and the space-based sensors owned by the Space Force. The Air Force has to be able to do their part to augment that with airborne sensors.

And so, walking away from the E7, I do not believe is a wise decision for the Air Force. I think they should come back and look at that. I think you're seeing Congress say something similar. From the capacity on the kinetic effectors piece, we're largely talking about fighters. Riki, you hit on it. What we've seen in the Middle East and Ukraine with the utilization of fighters to take down cruise missiles, unmanned systems of all sizes. I think that's great, but we got to have affordable weapons. And what you're seeing in Ukraine versus what you're seeing the U.S. do in the Middle East, Ukraine is using things like AIM-9s, which you only have a few of them on each F-16, and you got a lot more targets than you have AIM-9s, and those things are costing $400,000 to $600,000 a pop.

Whereas what we're doing on the U.S. platforms, we've figured out how to put rockets. So, now you got $15,000 per shot, and you can carry 24 to 48 of these things on an airplane. So, now I can take out 12 times as many targets on a single sortie and for a fraction of the cost. So, we've got to figure out how to expand that capability across our fighter force, across our allies and partners. And then we got to have enough fighters to put them on. To be honest, the Air Force continues to cut force structure without any replacements in sight anywhere in the near future.

And so, that ability to be agile, flexible, to move those forces around when the intel stream says, hey, there's going to be a threat in this area or that area, that ability to be flexible is absolutely required because we just don't have the resources to put ground-based defenses on every spot in the United States. So, I think I'll end it with saying, you know, we're talking about a lot of things here, and you just hit on the Group 1-2 versus Group 3 and above with Golden Dome. I guess we got to scope what the heck is Golden Dome?

Is this an acquisition program or is it fundamentally a vision for defending the homeland from subsea to space against every threat? If it's an acquisition program, then scope it to say, hey, it's going to be about, you know, ballistic or cruise or whatever, coming from outside opponents. But if it's about getting serious about defending the homeland, then it needs to be everything we've talked about. It needs to be joint, it needs to be interagency, it needs to be every possible threat, kinetic and non-kinetic, and we need to have every COCOM involved because, like I said, every COCOM's number one responsibility is to defend the homeland. I'll stop there.

[Mr. Riki Ellison]
Great. Great, Corky. Thank you.

Just going back to what you had said, it looks like one of the ways to do this is through a movable kit, a kit that NORTHCOM can just move to any city or place to defend and layered capability from the air. So, that may be one of the ways I'd like you to talk through that a little bit of what a kit is that would do that. And I think it's maybe different than ACE than the domestic kit would be.

And then from the basic American public, you know, we've grown up with understanding that we have a National Air Guard with F-15s, F-16s along our coast that can intercept anything coming in at it. So, that obviously happened. That's obviously what we had during the Cold War and during many years, even some today. Can you talk about, is that still a viable force to be able to build off of to do that? And cost efficiency of being able to still, is there a substitute? Is there drones to use for this instead of manned pilots to be able to do some of this countercruise stuff that we're talking about here on that with the kit?

And what is really the scope of this? Because you can't do every base, but you got to do a transport kit. I believe that Golden Dome is more of an acquisition movement. The NORTHCOM commander is going to be kind of the key of how you can operationalize this whole thing. But I think the architecture is going to be created by Golden Dome and then the acquiring of those capabilities done by Golden Dome. But certainly, they have to have the operational viewpoint from the combatant commander, not from the acquisition group.

[Major General (Retired) Charles "Corky" Corcoran]
Sure. Well, okay.

So, the threat, since the beginning, man, the threat's going to probe us, whether it's a state or non-state, they're constantly probing us, looking for vulnerability. And if they're not deterred, they're going to go after us at some point. And it's kinetic and not kinetic, like I said. So, John Behar, get the Coast Guard or whoever's responsible. Who's responsible for

the undersea cable drop points in the United States? Somebody wants to cut our cables as they come ashore.

There are all kinds of threats that we need to be concerned with. And again, that's why it needs to be a joint interagency approach across the board. For the Air Force, this expeditionary kit, because the threat is always probing. If the only thing you had was the ability to pick up an E7 and a squadron of fighters to go deal with a threat, then it would be pretty easy for the threat to pick a spot where you're not and go after. This is why you've got to have key critical sites constantly defended 24-7 by land or maritime or probably land-based assets. You've got to have intel coordination across the board and intel forward so that you can get as much SA as possible on any potential threat.

And then you use this expeditionary kit that the Air Force has to go either beef up the defenses in specific areas where there's an elevated threat stream or to go where you couldn't afford to put ground-based stuff because there's a threat stream. But we've got to acknowledge we don't have the resources to cover every square inch of the continental United States. We've got to put fixed stuff at the most critical sites.

And we've got to be able to pick up and either augment or completely cover other areas with this airborne kit. The kit, again, this is why I go back to the FAA piece. And even forward-based radars, places like Canada, over-the-horizon radars, etc., elevated sensors, space, balloons, whatever. But being able to augment that with something like an E7 sensor capability is great. You mentioned the Air National Guard, the fighters piece. Look, the Air Force force structure is not what you and I grew up with.

There's not guard squadrons, reserve squadrons, and active duty squadrons. Every Air Force fighter squadron is what's called a total force integrated. So they're all a mix of active and guard or active and reserve. And the Air Guard and the reserve folks that are in those total force units get forward deployed to combatant commanders on a rotational basis, just like everyone else. So we need to decide as a nation, are we going to chop some forces 24-7 to NORTHCOM, just like we do to PACOM or UCOM? Or is it going to be somewhat of a pickup game?

I would say you can't make it a pickup game if you're going to get serious about it. And if you're going to actually have forces assigned to NORTHCOM on a routine basis that would rotate back to a training status and rotate other ones to NORTHCOM, you're going to have to have enough force structure to do that. And we do not currently have the force structure we need to cover all the commitments we have around the globe, including the commitments that the NORTHCOM commanders expected to cover.

So I think you've got a package that has airborne sensors, that has kinetic capability that the NORTHCOM commander owns and can move around at his or her discretion to execute the mission he's assigned by the National Command Authority.

[Mr. Riki Ellison]
Okay. Can you give us just like a gross estimate on how many kits or how much do we need to provide the Air Force to do this mission for the Golden Dome loosely? Because that seems to be quite extensive what you're talking about.

[Major General (Retired) Charles "Corky" Corcoran]
You know, General Gio's staff and their plans, there've been a lot of brain cells put towards this and depends on the level, you know, the threat level we're at, the intel streams of how many in the past AWACS and the future E7s they need to deal with the level that the threat is – the threat streams are showing. So there's different levels in there about, hey, I need X number of – right now, AWACS. I need X number of AWACS in Alaska.

I need X number of AWACS where the President's currently traveling to. I need X number of AWACS over this large event like the Super Bowl. All that is laid out very clearly in plans that NORTHCOM has developed and constantly refines.

And at the end of the day is we don't have enough. We can't do – we really don't have what we need to do the day-to-day mission routinely in places like Alaska for Homeland Defense.

[General (Retired) Glen VanHerck]
Hey, Riki, can I add something there? It goes back to my comment about policy.

My answer is no, we can't tell you until they tell us. What are you required to defend? If it's everything, it's astronomical off the charts. We need to come up with policy on, these are the areas we're going to defend and we're going to accept risk here. And now the services and the commanders can build you a plan and resource that plan. But until that's done, we're just asking a question without being able to answer it.

The kit thing, I want to pile on that. And just real quick. So that's a reactive strategy, if you will, after an event occurs to fly in capability. It's really designed to counter group one to non-military type threats, such as what we saw in New Jersey. It is not what I would articulate as defense of our homeland, because if it's not there, it flies in afterward. It's not defending anything. Now, if you had specific intelligence, you may be able to fly in ahead of time as a deterrent and to defend. But the kit to me is not the solution for Homeland Defense or Golden Dome if counter UAS is included.

[Mr. Riki Ellison]
Glen, would you comment on the ACE kit? The other one that's out for Ford Expeditionary. That's different than this kit, correct?

[General (Retired) Glen VanHerck]
Yeah, I'm not an expert on that kit. And that's not NORAD, NORTHCOM responsibility is my understanding. But I think they're developing in flyaway type of forward deployment kits for drone kind of capabilities. But I'm not an expert on that. Somebody else may be.

[Mr. Riki Ellison]
All right. Thank you, Corky, for that depth. That was great. A great discussion. All right. We're going to push it over to Mark over in Taiwan. I know it's early morning there, sir. Thank you for staying up this late to participate in this discussion. I think you have a lot to add to it. So all yours, Mark.

[Rear Admiral (Retired) Mark Montgomery]
Hey, thanks, Riki. You know, it's good to talk about the Air Force here. And I think it's, you know, we've gone, we'll probably go through each of the services.

And Air Force is a unique one. If you had this discussion seven years ago, there would have been a much different discussion about the Air Force's involvement, because it would have included all the Space Force equipment. But now you're looking truly at the Air Force.

I think the number one thing I always want from the Air Force as a joint warfighter is that they historically have, if they didn't design it, they at least managed the joint command and control effort. And if you ask General Guetlein what's his number one priority, he'll tell you it's to get the command and control right. Now, he'll also say in that same statement to get the architecture right. I think there are two different things, but one is inherently enables the other. But getting the broad architecture right, getting the command and control right is really important. I'm suspect of doing anything other than building on the existing joint all domain command and control JADC2 system. And the reason is, is I don't think we can afford to be pressing forward with two every sensor, every shooter networks. But I think he should be given a pretty wide swath, pretty wide birthing to birth to put his DNA into the JADC2 that would eventually drive this network in my mind. And I'd probably say that no matter what you pick, whether it's JADC2 or something else, you better put a C in front of it for coalition, because we're going to need allies and partners in this effort over time.

And we're going to want them there. So I do think getting the command and control right is the first thing. Now, look, he may have to have something before JADC2 because it's not ready for prime time. It may not be in his first three years. I'm not certain about that. If so, he may say, here's something I'm relying on in the interim. I understand that. But I think getting the command and control right, having a long-term vision of where we'll sit 10 years from now is really important. And so I'm looking forward to hearing about that.

And I just think that's going to be anchored in the Air Force. That's historically where they're at. I mean, I say this, you've heard me bitch before. I think the Air Force missed a real opportunity on the cooperative engagement capability 35 years ago. But beating up current Air Force officers over decisions made when they were first lieutenants is probably not fair. But I do think the idea of every sensor, every shooter network is critical to this. That feeds into the next thing, AWACS. I agree completely with Corky. They've got to replace the E3 AWACS with a – for now, it's going to have to be an airborne air-breathing system.

I just don't think the space-based system is going to be ready. And I know that's unfortunate. That's not where the Air Force wanted to be when they were thinking about the retirement of the E3 a decade ago and seven years ago.

But we have not – technology has not been kind here and delivered the kind of system that the Air Force would want, so they have to replace it. Now, I argued pretty heavily for either the E2D or the E7 five years ago and four years ago, and I think the Air Force did the right thing picking one of them. I was agnostic on which they picked.

They just couldn't do the one thing they did. And this is what every service does. The Navy did it with something called the Constellation Crest Frigate, and we've just watched the Air Force do this.

They picked the E7 from Australia, the Wedgetail, and then made it not the Australian E7. They changed the pieces and parts, mostly in the radar and combat system suite, but significant changes to the plane. I think the cost has spiraled out of control. The deliveries moved to the right. There's only a uniform service can do. We've made an initial righteous decision look foolish.

And now, you're back looking at the E2D saying there's a proven reasonable cost aircraft with a suite that is similar but lesser than an E3, and there's a lot of good things in an E2D. There's not a full bathroom, full rack, full microwave. I mean, those will be momentous events for the E3 air crew if they were to move into one.

But it's a high-quality aircraft that can do a lot of the tasks required. And I think this is one of those areas where you and I talk all the time about how we're going to take risks, buy the less capable thing, but get more of it and on time. We talk about that in missile defense and effectors all the time.

Well, here you go. I know it's a big ticket item, but I think we're at the point where the Air Force may need to grab the E2D as it's still coming off the line, I think less than $200 million a copy. You got to be careful because the line has slowed down and that will increase costs. And with all the different whammy-dime systems on it, it is very capable. And it can in-flight refuel. I mean, I personally wouldn't want to be on a 12-hour flight in an E2D, but I'm retired.

So, I think the AWACS is an important part of this and it's going to be necessary for maintaining that situational awareness, both for our deployed forces in air defense, but more importantly in our homeland forces. And that fits into another interesting point, which is dirigibles in the near space, that's going to not be space force. It's either going to be the Army or the Air Force. I will say the service that built the coolest dirigible in this surveillance reconnaissance mission was the Air Force. It was something called, the Air Force was working with others, but it was something called ISIS, bad name, in the early 2000s. It was eventually canceled.

I think that was a good—the Air Force was onto the right thing, and it was up in near space with a persistent loiter. And if dirigibles make you uncomfortable, I think it's equally likely there'll be large UASs equipped with some of the same sensors, probably not as much power out, but some of the same sensors. So, a lot of opportunity there. And I think that's a mission set that could sit as likely with the Air Force as the Army, particularly the loitering UASs. And then I agree with Corky as usual on the fighters. There's a need for these.

I've been impressed with the APKWS, the weapon system, the Advanced Persistent Kill Weapon System Block II that he's referring to. The Ukrainians have used it to some success in a ground-based variant. The Air Force scarfed off like 10,000 rounds headed for Ukraine about two months ago to put with our Mideast forces. I think that's a little excessive. I'll just say there were 10,000 Iranian Shahids that are going to be flown at them, but I wish we could get some back to Ukraine. But that's a good system. We're demonstrating, as Corky said, the value of engaging a $30,000 target with a $10,000 to $15,000 weapon. And that's nice. So finally, those are the kind of areas I expect to see the Air Force play a role in.

And then finally, in the actual C2, through the AOC and other things, they'll compete with the Space Force in this realm. But historically in ground-based environments, terrestrial-based environments, the Air Force has played the leading role. They command and control a lot of these capabilities. I don't think we should change that. I think that's worked out for us historically pretty well. The Navy and the Air Force have worked out a modus vivendi for control over maritime spaces.

So that's what I had, Riki, and my thoughts on this. Again, the Air Force is an important player, probably not the key player compared to, say, Space Force or Army, but like the Navy, an important player.

[Mr. Riki Ellison]
And Mark, would you turn on the Air Force material command to be able to create some of the stuff that you're talking about to help? And if you look at the whole, just from your perspective, you look at the whole architecture, how much of is it—besides the C2, I know the C2 is huge on it—but as we look at the contributions to the effectors, where do you take the Air Force's immediate role? Because I don't think you can get much further than what we've got with their platforms, with the F-16s or F-15s out there to support that effort. And as Glen said, these movements are, the base ops are for drone one, drone twos. We got to think bigger for the cruise missile defense capabilities. And to just go off of that would be good.

[Rear Admiral (Retired) Mark Montgomery]
Yeah. So, look, I think you're correct in implying that the Air Force is, I'm not sure whether the material command would be part of the—

[Mr. Riki Ellison]
Well, let's just be clear with MDA. But MDA does not do cruise missile defense. They don't. I don't think that's their merchant, right? So, who does cruise missile defense?

[Rear Admiral (Retired) Mark Montgomery]
And in theory, according to JROC, this isn't the Air Force's mission. This is the Army's mission. They've just failed to do it. And at some point, the Air Force chiefs of staff, historically, for the first three years of their tour, don't comment on it. And then when they're getting near the very end, express frustration at the Army for not doing a good job, as do most combatant commanders who have others, so say EUCOM, for example. We've seen repeatedly UCOM commanders eventually kvetch about the Army's failure to provide a low-cost, short-range anti-cruise missile platform. So, I don't think the Air Force is going to do that mission. I do think there's a chance they'll do a lot of these surveillance and detection ones. And they should. They're very good at it. I mean, a large UAS up in 40,000-50,000 feet that's also equipped with an interceptor, then that would be the Air Force. But I think we're—That's not what I'm visualizing. I don't think that's the architecture that Mike Guetlein was attached to initially. So, we'll have to see.

[Mr. Riki Ellison]
Okay. Let's just open it up. Mark, do you have any comments on this discussion so far? We can continue the discussion on it.

[General (Retired) Glen VanHerck]
Yeah, just a couple of other things, Riki. I think that the comment about JADC2 is right. And I didn't want to lead anybody to believe anything otherwise. I think the foundation set for the data layer right now and the sharing of data in the common data layer and architecture is where we must, not only for Golden Dome, but for everything else. And so there's a sensor to show the tactical edge piece. But what we're also talking about here is sensor decision-maker for command-and-control decisions.

I think Admiral Montgomery made some points. We need to think differently, more innovative to solving the problem for our homeland. So either policies and laws need to change or we need to adapt how we feel the capability to operate within the environment in the homeland. And thinking differently about, you know, air-based platforms that not need to be stealth can be low-cost, you know, long-loiter, Arctic-capable, give you domain awareness and also provide effector capability, both kinetic and non-kinetic. It's something we need to think about. But today's thinking is based on a forward-power prediction where the threat environment is vastly different than operate differently.

So it will require us to think differently, especially for the Air Force. As far as air battle management, nobody does it better than the Air Force and the AWACS crews. The E7 was going to provide that. I'm not wed to a specific platform, but the Air Force is going to bring air battle management to the environment here in the homeland as well, which will be crucial. There will need to be prioritization of critical infrastructure resources during times of attacks on ground-based commercial telecommunications companies where communications are limited. That can be accomplished by an airborne platform plugged into a larger data link that is secure, resilient, resistant to attack.

These are things that the Air Force can deliver for our nation that we need to absolutely be thinking about. As far as counter-cruise missile, I need you to think differently. It's not kinetic effects. Counter-cruise missile can also be done with non-kinetic effects, use of the electromagnetic spectrum to deny, deceive, guidance, control, fusing capabilities. I'll see what Corky or Mark has.

[Major General (Retired) Charles "Corky" Corcoran]
I agree with General VanHerck and Admiral Montgomery. I'm platform agnostic as far as E2 or E7, but the Air Force can't walk away from this mission. The air battle managers are crucial. That C2 is crucial. Also, back to what Mark said, we can't build some duplicate parallel new C2 system. It's time to stop talking and start moving out on JADC2, CJADC2, as he stated.

I would love to hear what Mark and Glen think about the comment I made about the FAA. You got things like happened at Langley Air Force Base in December of a year and a half ago in New Jersey. We have things flying around the National Airspace Instruction. We don't know what they are. That's a foul. Are we getting after that through the FAA? Are we getting after that through Golden Dome? Is it neither? I mean, how can we not know what's flying over top of our country, whether it's 50 knots or 5,000? We got to get after that.

[General (Retired) Glen VanHerck]

Yeah, I'll go first. Absolutely. The FAA got to be part of the solution. They bring domain awareness with their radars. The military radars are already integrated and fused with the FAA radars, but this is an integrated, multilayered solution for defense of our homeland. I couldn't agree more that if it's flying in our airspace, we ought to know about it. So there are policy and legal ramifications and changes we need to look at, not only for defense of our nation, but as commerce looks forward to how we're going to deliver capabilities, whether it's Amazon or somebody else, we're going to utilize drones in our homeland to do that. So the FAA, Department of Transportation and Commerce, have to work with DOD, Department of Homeland Security, to come up with an architecture that allows for defense, but also commercial entities going forward.

[Major General (Retired) Charles "Corky" Corcoran]
There's a rapid increase in commercial space launch. It's only going to continue to accelerate. All this has to be brought in. Is there a formal link right now between the Golden Dome work, Guetlein, and what's going on with the national airspace structure redesigned by the FAA? Does anybody know?

[Mr. Riki Ellison]
I think he's in charge of integration. Gooey is, not the Golden Dome. The NORTHCOM commander is in full going in that December memo.

[Major General (Retired) Charles "Corky" Corcoran]
That's execution. I'm talking about the acquisition program that's going on the FAA side, or not an acquisition program. What's going on with Golden Dome?

[Rear Admiral (Retired) Mark Montgomery]
I don't think that link exists today. Whether it should exist or not, that's a good question, Corky. That would have taken some level of forethought that I don't see in the people who drafted the memo empowering General Guetlein.

I got one good question here, Riki. Let me pull from the audience. Before I do it, I'll just say, the thing that worries me the most is DOD saying we're canceling the E7, doing the E2. You can clearly see the line item canceling the E7. Nowhere do I see the line item pushing the E2D. The one way to make the E2D unpalatable to the Air Force is delay, delay, delay, shove it down their throat. The way you do this is you show right away we have a path to the future. There should have at least been the small trails of money that said finding out what it takes to turn an E3 backseater into an E2D backseater, doing the initial legwork on that between the Air Force and the Navy and stuff. A little bit of money in there to study it and to do it. Instead, you just say, we'll take the savings and figure out about how to do the replacement later. You always lose on that.

[Major General (Retired) Charles "Corky" Corcoran]
It's a budget shell game.

[Rear Admiral (Retired) Mark Montgomery]
Yeah. Hey, one question. Anyone can grab it here. There was eight of them, but we hit seven of them in the comments. I think Glen hit like five on his own. It says, the question, I see primes advocating for systems integrator-like role. What are the pros and cons of letting

industry perform that function, vice having the government do it? Which approach would you favor?

[General (Retired) Glen VanHerck]
I'll talk about that. I think the department is not set up today to do the systems integrator role. That's a fundamental change that Golden Dome is going to have to drive on how we're going to develop, field, integrate across. MDA does that, but I don't think they do it across the scale that we're talking about here. So, I don't see it just as a prime doing it. I see it potentially government partnering with prime. This is more than folks realize. This is a Manhattan Project kind of effort that we're talking about that's going to require systems integration. I'm not opposed to doing it different. I think it has to be done different.

[Rear Admiral (Retired) Mark Montgomery]
I'll go along with that. You're exactly right, sir. I'll go along and say that there's probably some authorities that are going to be needed to be given to the person performing the duties of the manager, or however you describe it, the Golden Dome manager is going to need authorities.

They're probably going to look like the authorities similar and in fact, probably greater than, the authorities that were given to MDA missile defense agencies from about 2004-2019, or 2006-2019, when they were really allowed to do some, when they were able to cut through some of the bureaucracy around initial procurement efforts. Because if they don't do that, they won't get off the ground. If they don't get off the ground, I think the senior officer in charge of Golden Dome is going to be in a lot of trouble.

[Mr. Riki Ellison]
Mark, I think they've got agreement on that. Mark, I think they're giving him those authorities. SACDEF's approved it. DEPSEC's approved it. It's just a matter of signing this thing. Because you can't do what you're talking about. You can't do it without it. You cannot do it.

[Rear Admiral (Retired) Mark Montgomery]
I love it. The words, “it's just a matter of signing something,” have crimped a lot of things in the past. So I'm excited to see. I agree with you that the intent is there. There are evil forces that work against giving, particularly in services, that work against giving independent agencies this kind of role. I'm all for it. I agree with you one hundred percent.

[Major General (Retired) Charles "Corky" Corcoran]
The incentive structure is wrong. And as General VanHerck said, the expertise does not exist inside the government, to be honest.

[Rear Admiral (Retired) Mark Montgomery]
All right. So that's a good set of answers there. Riki, we've hit this. I'll pass it back to you for the wrap, for your personal wrap.

[Mr. Riki Ellison]
I'd like to just go around, everyone, just to have a personal wrap on this and give us your insight on what you think the Air Force's role could be, should be for Golden Dome. Just a little point there or two. Glen?

[General (Retired) Glen VanHerck]
Well, I think we hit the role. I think the C2, air battle management, bring affordable, rapid, flexible, agile solutions that don't have to be there 24 hours a day, but can be rapid response options that we can move forward with.

I think Golden Dome is an opportunity to fundamentally reshape acquisition requirements and also how industry approaches this. We have to stop thinking about putting industry competing against each other for the same pot of dollars. How do you drive industry to work together, to collaborate, to solve problems for our nation, to field capabilities? I think that's one of the challenges General Guetlein will field. I think he's the perfect person to do that. And I look forward to watching you move forward. Thanks.

[Mr. Riki Ellison]
Thanks, Glen. Corky?

[Major General (Retired) Charles "Corky" Corcoran]
I guess I'll use a football coach's quote. “Do your job.” We got to do our job. We don't tell a linebacker, tight end, whatever. We need to do the C2 work—all the things FAST just said—C2 work, flexible ability. We bring fighters, trust our teammates to do their job, and we need to step up and do it now, not kick the can down the road, say, “ah, yeah, we'll bring this in five, 10, 15 years.” It's integrate what we have now at the speed of relevance, and acquire the things that the joint force needs and expects us to bring to the team.

[Mr. Riki Ellison]
Thanks, Corky. Mark.

[Rear Admiral (Retired) Mark Montgomery]
I agree with what General VanHerck and General Corcoran said. I think they got it right. I think the Air Force is a good service for innovation, and there's some opportunity here for innovation, like I mentioned, in near space, a bunch of other areas. And then getting CJADC2 right or JADC2 right is just going to be critical. This is critical for any, we could discuss anti-submarine warfare, anti-air warfare, you know, anything. If we, getting CJADC2 right is going to be critical over time for the joint force. So, looking forward to seeing that.

[Mr. Riki Ellison]
Thank you, Mark. Thank you, everyone. Thank you Glen, Corky. You hit the mark. You hit it. We've educated correctly on this. I would just add, I mean, I'm 100% behind all that, but it doesn't seem we have tapped the Air Force's genius, the Air Force's talent in doing that defensive warfare against offensive threats. We haven't tapped into that. And maybe it's because MDA has been focused on other stuff, but that needs to be tapped in because that's the best we've got in the country. I don't think it's the Army from air-to-air stuff. It is the Air Force and that needs to be a good set of focus point and funding and introduction to be a major player in the Golden Dome. The Air Force has to be. So thanks everybody for taking your time today. Really appreciate the insight. Thank you.