Mr. Riki Ellison:

Ladies and gentlemen, welcome good afternoon from a warm sunny June day in Alexandria, Virginia. The National Guard couldn't make it today, but the vitalness of this issue and how important it is, we are going to continue the discussion with my board members, Ty Thomas and Mark Montgomery. I'm Riki Ellison. I'm the founder and chairman of the Missile Defense Advocacy Alliance. We believe, and we fight for the development, deployment and evolution of missile defenses, because we believe it makes our nation safer and makes the world a safer place. I've been involved in missile defense for 42 years, started in 1980 with the critical thinking exposed to for the SDI, Strategic Defense Initiative.

Mr. Riki Ellison:

We were engaged with missile defense before SDI. The organization was founded in 1984. We've advocated through seven United States, presidents. Both parties. We have been engaged, the founding or with Ballistic Missile Defense Organization in 1994. We've been engaged with the Missile Defense Agency founded in 2002. 2001, and that fatal day changed the course of our nation and how we view missile defense. That day forced us to withdraw from the ABM treaty. That day was a cruise missile attack on New York City and right here in Washington, DC on the Pentagon. Because of that, NORTHCOM was founded, the ability to defend our entire country from cruise missiles. We also founded the Missile Defense Advocacy Alliance at that same juncture point.

Mr. Riki Ellison:

Since then, there have been nine combatant commanders of NORTHCOM and every one of them has advocated and asked for more missile defense, more cruise missile capabilities.

Mr. Riki Ellison:

And it is a vast mission. And the world today is seeing a country that doesn't have a cruise missile defense system capable of defending its population. Our near peer, Russia as of Monday has launched 2,606 missiles into Ukraine, and they come from launch points on the sea, in the air and from the land.

Mr. Riki Ellison:

It is a driving factor in why Congress wants our country to be adequately defended. Our near peers have demonstrated their cruise missile capabilities in the Arctic around our national borders. It is a relevant, important capability that we must address and we must defend against. And this discussion is on that.

Mr. Riki Ellison:

Our Congress and Department of Defense are making a decision on who should be the lead systems architecture for this and making the decision on who should be the lead service on this. And the requirements for it come from our NORTHCOM combat community.

Mr. Riki Ellison:

So I would like to start the discussion on the requirements first, so we understand thoroughly what the requirements are and what kind of capabilities are out there to fulfill those requirements that we're seeing today to defend this nation from cruise missiles. So I would like to introduce Mark Montgomery, former retired rear admiral. That was three for INDOPACOM and obviously also in Europe and has extensive knowledge on cruise missile threats and highly involved with it.

RADM (Ret) Mark Montgomery:

Thank you, Riki. I'll get right into it and say, look, there's a clear threat and there's a need for capabilities. And then I think Ty kick on after me on both these issues, but I'll start with a trite and say, look, Russia and China have both been committed to cruise missile and ballistic missile defense over the last 25 years.

RADM (Ret) Mark Montgomery:

Their procurement, their research development acquisition procurement in both capability and capacity shows a strong commitment to this style of warfare. As you mentioned, they've been executing it in Ukraine, 2,600 missiles. Even if they've only had a 60% effective rate, which is I think what we historically saw with them in Syria and other places, that is a lot of damage being done to Ukrainian air fields, motor transport centers, repair facilities. We know they hit the factory that built the Neptune missiles that attacked the Moskva.

RADM (Ret) Mark Montgomery:

They've demonstrated a commitment to this weapon system and I think they've had some measure of success in that. I think as we look forward into the defense of our homeland, Russia particularly has started to make that investment in long range, greater than 2,000 kilometer cruise missiles that can either be launched from land, ground launched or launched from bombers.

RADM (Ret) Mark Montgomery:

You can think of some of the longer range Kalibrs, some of the Granats, their switchblade, not to be confused with our switchblade and their Sampson missiles. These are all in the several thousand kilometer range. And probably most kind of like... With the greatest media attention has been their Skyfall system, which is a SSC-9. It's a nuclear powered missile.

RADM (Ret) Mark Montgomery:

Now, its press has been more associated with the accidental distribution of radioactive material on the near launch sites and the death of scientists who are close to the launch. But eventually the Russians are persistent. They will work and develop this. They are going to have missiles that reach out and touch us.

RADM (Ret) Mark Montgomery:

Now, right now, the Chinese have not developed exactly those weapon system jet as cruise missiles, but they usually lag the Russians in these kind of development areas by five to 10 years. So I think it's just around the corner. They also don't have quite the commitment to the bombers historically. They have a shorter range, much more targetable bomber than the Russians have had, but they're now committing to the new J-20 to a new bomber that I think can deliver their long range attack cruise missiles, their CJ-10s and such from their air defense systems.

RADM (Ret) Mark Montgomery:

So I say that in the context of... And almost most of these weapons as I've mentioned the warhead up front can be conventional or nuclear in a lot of cases. So there's a lot of capability out there, a lot of threat out there. In terms of our capability, and I'd asked Ty to comment on this. I mean, this is a real challenge for us. We have thought about defending ourselves in the past. Some of us are old enough to remember seeing Nike air defense sites when we were really young. And now you can go see historical

park ones. I think there's one in Angel Island, in San Francisco and a few other areas on the West Coast where you can see where we've previously done this mission.

RADM (Ret) Mark Montgomery:

And we're going to have to think about how we defend. Are we a counter-value or counter-targeting? What's the density of our defense efforts? So there's a real threat and there's a need for capability. I'd ask Ty if he wants to jump in on that.

Lt Gen (Ret) Jon Thomas:

Okay, great. Thanks, Mark. Good morning, everybody. I'm glad to be part of the discussion. Mark, before I jump into the particular question of what do we currently have right now and how possibly will we use it? I did want to tap on a couple things on threat as well. Maybe not the particular systems because you walked through a good portion of them, but just to remind all of our readers or listeners that this is a multi-axis threat in the sense that, okay, so in the Pacific, yeah, we think really is the idea that we would have a Yuan class sub show up off the West Coast of the United States so that their cruise missiles could range targets.

Lt Gen (Ret) Jon Thomas:

Maybe no. But I'll tell you what, if there was any possibility that could happen, the Pacific fleet is going to be darn interested in that. It's going to consume resources to be able to keep an eye on it. Okay? So that's one axis. And oh, by the way, remember the Russians have a far east as well. Of course, across the polls, the Russians have systems and so they're going to be able to come over Canada. And NORTHCOM and STRATCOM in particular are very concerned about that.

Lt Gen (Ret) Jon Thomas:

And then obviously the Atlantic, it's primarily Russian problem. Remember, the Russians have a sub called the Severodvinsk. That's a new class that they built. It's a pretty good sub. It might be hard to find. And so the axis are, if anything, we would think maybe the Caribbean is not, but it's still a maritime environment and people can get there. So let's not forget that this is an all access threat in terms of geography for us.

Lt Gen (Ret) Jon Thomas:

Second is the capability and intent equals the threat. I don't think there's any question that the Russians are really, really upset. And the same thing with the Chinese in terms of great power competition. So we can't write that out. So the whole thing is real. That's my point of elaborating on this is that we knew in the '70s and '80s that it was a real threat. It was a Soviet threat. Then in the '90s and a decent portion of the next decade, we kind of like, "Yeah, they're never really going to do it. They don't have much of the capability."

Lt Gen (Ret) Jon Thomas:

Well, the world has gone back to, and now we have a PRC element of this that represents a legitimate threat. So what can we do about it? We have a limited set of ground based capabilities associated with the national capital region. I would say very limited. Has capability, but very limited.

Lt Gen (Ret) Jon Thomas:

We have other systems, but we got to remember when we talk about our capabilities, big distinction between ballistic missile defense and cruise missile defense. So we have some limited capability for ballistic missile defense there. I think everybody is familiar with that. But otherwise our cruise missile and defense capabilities as available now are really the rest of them are in the air component. And they're represented by the air national guard that has air sovereignty alert at various locations throughout the nation.

Lt Gen (Ret) Jon Thomas:

And those air sovereignty alerts if properly queued to the threat, and the limited number of weapons on the aircraft, they could engage a limited cruise missile attack that occur on the United States. But we're talking small numbers of weapons. And you got to find them first. So all that to say that if we want to treat the robustness of the threat that potentially exists, we have to do a lot more than what we're currently doing.

Lt Gen (Ret) Jon Thomas:

We're not zero balance, but we're not too far from it to get back to answering your direct question, Mark. I'll stop there and go back to you, Mark. Back to you, Riki.

Mr. Riki Ellison:

As you pointed out, ballistic missile defense, we have missiles that can cover the entire 50 states. Cruise missile defense mission is a lot more challenging, and I don't think we could ever cover every single city in the United States. That would affect the ability for us to create sensors that can pick up low heat, small targets over the horizon, where these are coming from is critical. And I saw the mark up of over horizon radars, four of them. I think there's three in one house and four in the other house that look they're going to be strategically placed on our borders facing out to start that tracking aspect of it.

Mr. Riki Ellison:

We know we've developed some great space satellite capabilities. There's still maturing and still developing aspects of that. But having the awareness first before you have the effectors is absolutely critical for this. Can you talk a little bit more, Mark on that aspect of the sensor network and the challenges that we are going to have with doing an entire cruise missile defense architecture for this country?

RADM (Ret) Mark Montgomery:

Well, I'll leave the sensor discussion to Ty. I think he's an expert, but I'll pick up on what you said, which is strategically...

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RADM (Ret) Mark Montgomery:

... on what you said, which is strategically you have to cover... We're going to have to be able to detect a hundred percent of our volume. We're going to want to maintain situational awareness over all our battle space, which in this mission, the cruise missile of defense of the Homeland is all of the United States airspace and some significant distance away. We need to have situational awareness on all that. Even if we can't defend it all. Then we have to make a decision and it's going to be a budgetary driven

decision. There's going to be a mix of strategy and budget of what do you defend? Because let me just tell you what the answer's not going to be. Everything. There isn't a budget... Heritage hasn't dreamed up a budget that is that big that can fund all this stuff. There is not enough money in that.

RADM (Ret) Mark Montgomery:

And honestly, at some point, there's not a legitimate mission set for that, but we'll have to make a decision on counter value versus counter targeting. Do we defend people? Do we defend specific equipment or specific sites that have military value? Or do we defend large population centers or do we defend both? There's a whole system of critical asset lists, defended asset list that you go into.

RADM (Ret) Mark Montgomery:

Ty had a good line. I'm going to steal it. We can have a really big critical asset list. And like he says, the NORTHCOM commander probably has it. And then you can have a pretty limited defend asset list, what you could defend. And if one is 5% of the other, I'd be optimistically shocked. And even with a concerted effort here to develop a new weapon system that covers more area, that's more effective, there's going to be limits on what you can procure. So how much can you make your Dow match your cow? And the answer's going to be not enough.

RADM (Ret) Mark Montgomery:

Now this is different than we do with forces in the field in INDOPACOM or in EUCOM or CENTCOM. Where we desire there, we want the Dow to match the cow and we work on it. And that's because military targets in a war zone are something you think it's likely to get attacked.

RADM (Ret) Mark Montgomery:

And look, one of the problems we've had in the Middle East recently is our Dow not matching our cow. We don't have the air defense systems around some of our air bases and our army footprints. And as a result, we take hits. Big hits. Remember when I said that a hundred percent situational awareness? That gives you some passive defense capability that you can take advantage of. So I would say the capabilities we need are going to be that hundred percent situational awareness, some percentage of a cow covered by a critical asset list covered by defendant asset list and then some kind of system to communicate this. I leave that to Ty because I know he is an expert on that.

Mr. Riki Ellison:

Mark, just before I go to Ty, we know that in 1958 we put 200 Nike Hercules sites on 40 cities in 30 states. So there was a targeted list that we wanted to defend and we did it with the United States Army on that. So I just wanted to put that out there for that.

RADM (Ret) Mark Montgomery:

And I'll put one other fact out. I stipulate your fact is correct. I'm not sure it was a hundred percent coverage, but it was much higher than anything I could dream of today or probably General Thomas could. But I'll give you one other fact. We were spending between 4.5 and 5% of GDP on defense back then. We're now spending 3.5%. That percent and a half is 300 billion. 250 billion. That's a big Delta. And that Delta translates into capacity and that reduced capacity translates into that smaller Dow, if you ask me. Now, I'll pass it over to Ty.

Lt Gen (Ret) Jon Thomas:

Okay. Thanks Mark. Closing the effects chain has to start with find, fix, track and then target. Okay. So the find part, that's the broad area search. Space to make it help. I mean, there are sensors that we have on orbit. There are things that we have planned that we will put on orbit in the next few years that will help with that problem, which is primarily IR based, "Hey, we've had something come up that's got a certain characteristic and it's now an object of interest and we're going to pay attention to it." We've got a pretty decent command and control system associated with the OPIR sensing infrastructure.

Lt Gen (Ret) Jon Thomas:

But all that is going to do is then queue a subsequent sensor. If we get over the horizon radar, as Riki, you mentioned that will also help because that will get initial sensing of something that's out there that we want to go look at further, but neither of those are going to give us a track. Okay. The track is the goal that allows us to actually affect the target. So once those two type of systems... And then remember, we still do have air traffic control radars and things like that some of them are looking in the right place, not optimized at all for this mission set, but they are sensors that are available that we could possibly use to queue. But then we got to go out and look at some... Go ahead.

Mr. Riki Ellison:

The E7? Are you going to talk about the E7?

Lt Gen (Ret) Jon Thomas:

I'm about to get to that, which is the... So now you have a queue, "Hey, go look at the coast off South Carolina." Or, "Go look 500 miles into the north Manitoba province of Canada," or whatever. Something's got to go do that, and that is probably an active sensor. It's probably some form of ISA radar to be able to go from queuing to actually produce a targetable track. And that really has to be something that gets direct line sight. Okay. Well, we have a system that can do that. It's called the E3. It's incredibly old. It's got analog systems, not digital systems. And the reliability on the airplane is dreadful. Just tell you that. I mean, I saw in the Pacific for years. So the E3's not going to get the job done for us.

Lt Gen (Ret) Jon Thomas:

So we probably need a new airborne early warning control platform. The air force has made a decision to go single source on the E7. It's still five years out, gentlemen. Okay. Even on a single source acquisition profile, that's what it looks like it's going to be before we're fielding E7 in any kind of quantity at all. So we have a near term capability gap that's got to be solved. Don't know the answer to that question.

Lt Gen (Ret) Jon Thomas:

There are also other ways to solve it though and we've experimented with this before. Whether it's tethered Aero stats or other type of systems, you just need to get some elevation for that active sensor to be able to look out far enough, to acquire the target, and then start to generate a track. We have a decision to make. We're going to talk about architecture and who might architect and all that, but that is the key next element to actually get to the tracking that allows you to do the targeting.

Lt Gen (Ret) Jon Thomas:

Once you get a track, it gets pushed into our command and control systems. There's various ways to pass that track. There's various ways to get that track to an actual shooter, whether it's an F15C, an F15-EX maybe, which is a pretty capable air defense system once those come online. Or if we're able to get effectors that are on the ground, at a relatively low cost, capable system, then the track goes to that. And then they fire on the track with the authorities that they've got and we engage the target.

Mr. Riki Ellison:

So Ty, on a bigger level, where is the offensive coordination with the defensive coordination for a joint all domain command and control, which would rise above this and create the deterrent that we're looking for? This is a deterrent capability, I think more than a defensive capability for us to put in place to back them off to doing that. Can you talk a little bit about how important the JADC2 is in terms of deterrence with this structure underneath it? Or is that not effective to doing this mission?

Lt Gen (Ret) Jon Thomas:

No, I mean, I think we all know there's four pillars to integrated air missile defense. Okay. There's active defense, passive defense, command and control and offensive operations. So you're touching kind of on the last one as an element of deterrents. There's two pieces of this. One is, and how we have our responsibilities laid out across the globe, our structure associated with our geographic and functional, all of our unified command commands. If it's within a given Combatant Command, that command and control and the JADC2 structures are all going to orient on that Combatant Commander. So if it's a threat coming across the poll, for example, from Russia, inbound, then the NORTHCOM commander also in his NORAD role has that responsibility. So I think the lines of coordination are going to be fairly smooth in terms of if you want to attack the archer before the arrows start coming out of that thing, that's one thing.

Lt Gen (Ret) Jon Thomas:

But if now you start talking about, no, we really want to... The command and control that's needed in the coordination has to be across Combatant Command boundaries because those Russian bombers we're talking about generated out of bases in Russia. Well, that's not the NORTHCOM commander's area of responsibility. He's got to be talking to the UCOM commander. And there's obviously a NATO piece of that because the implications. So to do offensive into Russia to deter them from launching a cruise missile strike against the United States can be done. Very complicated. The subject of many, many current and previous tabletop exercises amongst all the Combatant Commands, because you get into a discussion of who's owning the risk and where and who has the authority to direct the strike and what does it do and what does it go after? And how much are we escalating?

Lt Gen (Ret) Jon Thomas:

These are all questions that are really, really important and have to be examined before we do that. But fundamentally, Riki, your point, which is we have to have that fourth pillar of integrated air missile defense, which is making sure our opponent realizes that you won't be able to launch these things with impunity. And we have the ability to reach out and put the touch on you if you choose to. We have to be able to make sure they understand we have that capability and then intent if necessary.

Mr. Riki Ellison:

I'd like to move the discussion now to the who's going to be in charge of this? Who's the authority? Who's the acquisition? Who's the architect? Who's the lead service? And we know there's some pretty

high pressure being put on DoD right now to come up with that solution. And that solution I think, is coming up. It has to be done before July, the end of July to have that happen. So let's just go through what are the options here? What are the options the United States has to do this correctly? Well, I don't say correctly. To do this the best that they can and are most capable of doing this mission. Because that's what everybody wants. Everybody wants to name that group or agency, etc. Mark, you want to start with that?

RADM (Ret) Mark Montgomery:

Yeah. At first, I'll follow up what you said, which is that the authorizers were threatening to fence the deputy secretary defense's travel budget, kind of a low brow, but still effective move. And it has caused the expected response, which is that Deputy Secretary Hicks has said that we'll get an answer by the end of July. July 31st.

RADM (Ret) Mark Montgomery:

Let me tackle the architect part because I think these are obviously two different questions. There is not a magic organization out there that can do architecture plus be the operator of a system. We don't have that anymore. That capacity or capability is gone from our forces. So let me argue about the architect. We, the three of us, were all significant contributors to a MDAA Roles and Responsibilities Report that laid out clearly our belief that the Missile Defense Agency is the premier missile defense systems architect. It should not be a surprise to anybody. It's where most of the engineers sit. A lot of the engineers sit. It's where our successful long term acquisitions have been run out of.

RADM (Ret) Mark Montgomery:

And we said very specifically, MDA should develop, acquire and field the missile defense system architecture required to prepare for existing and emerging missile defense threats. Now, look, we were thinking in this about the hypersonic threat. I don't want to give us too much credit here. Really, I think when the three of us were talking about this a lot with John Rood and others, we were really thinking about the hypersonic glide vehicle and some other things that have us very nervous.

RADM (Ret) Mark Montgomery:

But the reality is what Ty and I have just described is that an emerging missile defense threat. The adversary seeing that we had no capability has stepped up their game. With the Russians, it's the development of really long range, land attack cruise missiles. They've always had the bomber release cruise missile threat. And with the Chinese, I think I said the number wrong earlier. It's the YJ20, not the YJ10. That's a long range air launch cruise missile that they can drop from either their kind of aging, but just like our B52s, still capable H6, or from a whammy dime bomber they're building now. I believe the 20. H20. From my perspective, this is an emerging threat. This falls into the MDA's bailiwick.

RADM (Ret) Mark Montgomery:

Now look, I want to say first and foremost, the Missile Defense Agency better be doing the research development test and evaluation for defense against hypersonic glide missiles and complex hypersonic cruise missiles. They better be doing that. That is priority one, two, and three for their RDT&E. But I'm going to tell you, coming up behind that now is thinking about our defense against these long range cruise missiles. The good news here is this is a subset of capabilities and capacities we have. We know how to shoot down cruise missiles. We know how to shoot down long range missiles, and we're soon going to know how to shoot down hypersonic. So as this threat, this Homeland defense cruise missile

threat grows, the Missile Defense Agency is going to be well positioned to do the RDT&E. And then the S and T, the testing for the development of these systems. And I think the MDA should progress the missile defense systems all the way up through low rate initial production, and then pass it on to a service.

Mr. Riki Ellison:

Mark, they have a very limited budget. I mean, you're adding a tremendous mission here, right? What goes with it? And authorities.

RADM (Ret) Mark Montgomery:

No one that we could possibly mention. If Ty and I listed every defense agency and every service, no one's sitting on like, "We did have this city of money we didn't know what to do with. We'll throw it into this long range cruise missile problem." Right? New problems require new authorities require new appropriations. Yes. I mean, anyone who doesn't understand that doesn't understand our defense budget system. And anyone who thinks that we're sitting on a Bishop's fund with 10 or 15 billion dollars in it ready to go doesn't know how tight. No service is sitting on that. No singular defense agency is sitting on that. This will be a new requirement and it will require new appropriation to deal with it. You're absolutely right. Maybe MDA gets a little bigger. Maybe they have to have a few extra engineers.

RADM (Ret) Mark Montgomery:

I'm not in charge of MDA's day to day manpower, but I'll tell you, I have no problem assigning them this mission to get it done. One other thing I'll say is, again, and we've said this before, both all of us have on here and John Rood has, the secretary of defense needs to return the rapid acquisition authorities to the MDA that existed from 2002 to 2019. It allows for more efficient and rapid deployment of capabilities, including the ability to set detailed performance requirements without approval by a burdensome and bureaucratic JROC which is Joint Requirements Oversight Council effort that's put in. Whomever gets these assignments is going to need those. But I think it's the right place to put these.

Mr. Riki Ellison:

And Mark, what I think happened was the RKV failure and the history with our ground based interceptors has created Congress and DoD putting tremendous oversight on them and taking their authorities away. That's got to change. We're not playing in those years. We got to shift out of that mindset.

RADM (Ret) Mark Montgomery:

Believe me, I come from a service that developed the LCS, the A12, the DG-1000. I could go on. There's been some real losers in our acquisition effort. The army, their acquisition hall of fame is all stuff they designed in the sixties and seventies and built in the eighties. Since then, it's been a wasteland of Comanche future combat system-

PART 2 OF 4 ENDS [00:34:04]

RADM (Ret) Mark Montgomery:

Wasteland of Comanche, Future Combat System, MEADS, SLAMRAAM. I could go on, right? No service sits around and says, "Boy, we haven't had a failure." I understand that. The difference here is, these

things are emerging rapidly. They have to be done with speed and efficiency to tackle them, and I just don't think the standard acquisition process... I mean, Ty just said a great thing. A weapon system that is literally owned and operated by two of our allies, of which is using an airframe, a Boeing 737, and radars and sensor systems that are all exist is still a minimum of five years away on a single source contract. And that, by the way, that's like three consecutive miracles are going to occur within the next four years to allow a five-year delivery.

RADM (Ret) Mark Montgomery:

But that's the system we're dealing with. If we think that the Chinese and Russians are like, "You know what? We're going to take a pause here while you guys get your acquisition act together," is the way forward, I'll sign up for it. But if we all assume the Russians and Chinese are pushing hard to create asymmetric advantages where they see our vulnerabilities, then we've got to empower MDA. You know what? They'll screw up once in a while. Noted. Move forward. Services screw up with the high oversight. All those weapon systems I mentioned had tons of oversight and draconian failure.

Mr. Riki Ellison:

Thank you, Mark. Ty, would you agree with Mark's assessment that MDA is the best thing out there for this? What about Space Force? What about Air Force? They own some of the radars, they own air-to-air, they own the command. Can you just give us a reflection on that aspect of it, if that's the correct way to go or not the correct way to go from your perspective?

Lt Gen (Ret) Jon Thomas:

Yeah, yeah. I agree with Mark, but I'm going to go at the justification in a little bit different way, but I can't do that until I actually take a poke at my own service on this E-7 thing. So yeah, I mean, five years. And why are we going sole source if in the five-year timeframe, you could actually maybe have somebody else build something besides what Boeing's doing that might even be more capable? We're not even looking at that. We're single-minded on it. We'll still get a decent system, but I don't know that the US Air Force right now has their eyes open wide enough to what the possibilities are if they're going to live with the five-year timeframe on the E-7.

Lt Gen (Ret) Jon Thomas:

That said, let's go back to... So the system architect acquiring agency, the reason why MDA, other than the things that Mark said, why MDA is the right answer is missile defense is inherently a joint mission, okay? The very few instances of where it's not joint are limited to in-the-field maneuver forces, pretty much a tactical situation. You're like, "Okay, you have an Army and Patriot system that's fielded forward that's defending a division, and much of that engagement is all consummated internal, that Army corps that is there" But that's not what we're talking about here. We're talking about large-area air defense, in this case, the continental United States, okay? And that whole effects chain, as it has to occur in order to consummate an engagement, a successful engagement with the inbound target, requires space effects, requires air effects, requires land domain or maritime domain effects. All those things have to come together to have a successful engagement.

Lt Gen (Ret) Jon Thomas:

Okay, who provides those capabilities? Well, where you mentioned several, Air Force, Space Force. If, for some reason, it's the Aegis Combat System that's doing it, it's the service of the United States Navy. If it's Patriot that's doing it, then it's the Army. The way that we work best as a joint community when

it's a complex, difficult design problem is to have somebody that's riding overhead that goes, "Okay, we see how we can fit all of these things together," and then gives some guidance, with the backing of the secretary of defense. He can't step away from this discussion. There has to be leadership and clear direction, and when they do, they got to pick who's in charge, and MDA is positioned to do that. Cruise missile defense isn't in their bailiwick right now. It has to be. It's a-

Mr. Riki Ellison:

So in your point, so MDA creates the capability, then what?

Lt Gen (Ret) Jon Thomas:

Yeah, yeah.

Mr. Riki Ellison:

Right? And then who's going to take that responsibility? But that's a different discussion.

Lt Gen (Ret) Jon Thomas:

Yeah. So MDA, there's no service called MDA, right? And the way that we present capabilities and we employ and sustain them is through our military service, and there's a thousand good reasons for why we do it that way and we should continue doing it. So then the question is, MDA develops the architecture where necessary new systems are designed, acquired, and procured, and then they've got to go to a service to employ it. Well, you do need a lead service for whatever weapon system, whatever sensor that comes out. So if the vast majority of them are associated with a given service, then you could say that's the lead service for our cruise missile defense.

Lt Gen (Ret) Jon Thomas:

But let's not forget that there's still going to be others that are contributing to it, and every situation, and I know we've had some disagreements inside MDA about this, I don't know that you always have the same answer for every tactical problem that's out there. Cruise missile defense of Guam and the Second Island Chain is different problem than cruise missile defense of the continental United States. We may have a different answer for that, but the bottom line is yes, the MDA does the design acquisition procurement, then a service needs to be lead, then that decision needs to be made by the DepSecDef and SecDef, and then everybody's got to march to that tune.

Mr. Riki Ellison:

Mark, what about the people that say, "Hey, we got the best cruise missile defense in the world on these ships. Why don't we just back them up and defend some of our coasts, like we're doing with Guam? And why not the Navy, that knows how to do this, do this mission, VLS, etc?" And then the other group said, "Hey, we got five THAAD. If you got a bunch of Patriots sitting here in the United States, why don't we empower those to go out and defend... I mean, a couple of THAADs to do the effectors?" So how do you argue that or how do you dismiss that with the architecture? I'm just...

RADM (Ret) Mark Montgomery:

So I think people are referring to why don't we put ships directly off the coast, East Coast and West Coast of the United States, and the issue is that that gives you a very limited defended area that would not cover the likely highest priority spots on the NORTHCOM commander's critical asset list. Look, if we

could somehow... I don't want to get into all the dynamics of ballistic missile defense, but if we could somehow place ships north of Canada, in the Arctic ice pack, they actually could do something. I don't want to get into all the details, but there would be some value in that. That's not going to happen. It's going to take a lot more global warming before we get to that condition.

Mr. Riki Ellison:

What about the Great Lakes?

RADM (Ret) Mark Montgomery:

Getting Aegis ship into the Great Lakes would be an achievement. And again, the kind of over-theshoulder shooting I'm talking about would really have to be done downrange. Okay, they're not good. That is a very inefficient, ineffective, limited Dow-supporting plan and, on top of it, extremely costly, using Multi-Mission warships, on one of their seven or eight missions, completely dedicated to that. They couldn't even go and hunt the Yuan submarine that Ty postulated at the front of this because that would get them out of their kind of launch basket area very rapidly. And on top on top of that, you have a lot of manpower committed. When you think about the number of people at an Aegis Ashore site versus the number of people on an Aegis ship, it's about a four to one, five to one, or even higher ratio, depending on what your watch stations are.

RADM (Ret) Mark Montgomery:

My point on this is, it's the least effective, least efficient, most expensive solution, and although that does sound like a normal DOD, yes, it's not the right thing to do. The Navy's not the answer to this. The Navy was an answer in 2001, when we thought there might be more planes coming across the Atlantic. There was an operation called Noble Eagle, where we used destroyers for that purpose. We need to get away from that idea and land on a ground-based system that's put in the right place to defend the assets that the NORTHCOM commander has prioritized.

Mr. Riki Ellison:

Can you talk a little bit about the Army role, since they had this role in the '60s? And the capacity... Well, I know they have the capacity, they have capability.

RADM (Ret) Mark Montgomery:

First of all, the Army has fantastic air defense capability out of Fort Sill, they have a whole school dedicated to it, and there's a mixed artillery, anti-air artillery grouping there, and it's impressive. On the other hand, this is a mission the Army has pretty judiciously walked away from since the demobilization of HAWK and I-HAWK at the end of the Cold War, and then the subsequent failures with SLAMRAAM and MEADS and the very slow development of IFPC. The Army air defenders are at the very high end with that and Patriot at the very low end with C-RAM, and this kind of cost-effective cruise missile defense has not been their bread and butter.

RADM (Ret) Mark Montgomery:

And in fact, when assigned the mission of defense of the homeland of the National Capital Region, the NASAMS systems were procured by the Army but are now maintained and operated by the National Guard. Seven different states support battalions that rotate through the equipment that's maintained here in the Washington DC area. I just don't think this is something... The Army has a lot of repurposing

to go on. I think in the context of a shrinking force, to some degree, and I don't think assigning of this mission exists.

Mr. Riki Ellison:

And the role of the Army is expeditionary on principle.

RADM (Ret) Mark Montgomery:

Well, I'm not going to stipulate to the expeditionary nature. I agree the role of the Army to try to involve themselves in anything that appears very interesting. That's different than expeditionary.

Mr. Riki Ellison:

But I think we need to broach the real discussion of who operates this.

RADM (Ret) Mark Montgomery:

Yeah.

Mr. Riki Ellison:

And US homeland, we're doing our ballistic missile defense with National Guard, we're doing our cruise missile defense for the Capital Region with National Guard, we're doing some of our air patrols of the coast with National Guard. So that's got to be looked at because that relieves a lot of pressure from whatever leads service is going to do this. Just want to hear your thoughts. Ty, go ahead.

Lt Gen (Ret) Jon Thomas:

Riki, let me jump in. So really, really important for everybody to understand. The Air National Guard and the Army National Guard are supporting of the core service, okay? US Air Force, US Army, okay? The missions that they have derive from the missions that the services have. So if the Army has an air and missile defense mission, then the Army National Guard can have that mission. The equipment, the training infrastructure, and everything that goes with it, it's almost exclusively, with a few rare exceptions, all of it is procured by the parent service, okay? So Patriots, Patriot systems, THAAD systems, those aren't procured by the Army National Guard. They're procured by the US Army. And I'm excited about the idea that we would have guardsmen defending the homeland. That's one of the original reasons for why they existed, state militia and then federalized for the national mission, but they're not going to be the ones to buy it.

Lt Gen (Ret) Jon Thomas:

My whole point here is that unless there is Army institutional commitment to procuring, sustaining, and having a training enterprise for those systems, the Army National Guard's not going to be able to do the mission. I'll share my opinion and I'll start first with the very same thing Mark said, which is that the air and missile defenders in the US Army are fantastic, both the US Army and the Army National Guard, and they are present in the air operation centers across the globe, they work seamlessly with the rest of the joint force there doing the command and control, and they perform magnificently in the field.

Lt Gen (Ret) Jon Thomas:

But I will take the institutional US Army to task for the very reason that Mark laid out, which is that they are not focused on that mission. That may upset some soldiers out there that are hearing me say that

right now, but I believe that that's the truth, because instead, there are other things that the Army is putting its investment dollars in that are probably being done by other services and maybe even done, depending on the circumstances, more appropriately by other services, and yet, there is a real capability gap that this discussion is about right now, and it is unmet and, right now, it is a core Army mission. Something has to be done about that.

Mr. Riki Ellison:

Mark, would you comment on that, on the National Guard, what Ty just said? Do you believe that that lead service is Army, because it's the land, and eventually National Guard, because they can run the operations of the US homeland?

RADM (Ret) Mark Montgomery:

So here's what I think, the National Guard, if assigned this mission, could spread it across a number of states that are in the areas where your defended assets are so that you could move units around. So even if you don't have all the units you want, you have the capability to move unit. Units can move pretty... Most of the stuff we're talking about is fairly mobile and it can move, and then you can develop this capability. There's already seven states with very good air defenders that are National Guard, who do the NASAMS mission. I just think it has that kind of mission focus on defense of the homeland already in both disaster management and in countering threats to the homeland.

RADM (Ret) Mark Montgomery:

So I think the National Guard is uniquely qualified for this mission. I think the people who probably would technically be in the best position is the active duty Air Force, I just think, and the Air National Guard, but I think they're tethered to different missions, so I just don't think there's the capacity to do that right now. I think I agree with Ty's estimate of the Army being focused on other things. I said it not as succinctly as he did. So I think that does leave the Air... And obviously, the Navy would run from this mission Ashore like they are trying to run from the defense of Guam Ashore. And this is fiftyfold larger in terms of personnel. I think the Army National Guard and, to a degree, the Air National Guard would want to support this, but I think mostly Army National Guard are well-positioned to do this mission, they already have the technical relationships and some skill sets, and it falls naturally into their bailiwick, and it would keep that kind of ground-centric version on this.

RADM (Ret) Mark Montgomery:

Obviously, the Air Force is still going to be running that situational awareness and that command and control picture that goes with it, as they do for the defense of the National Capital Region. I think that this is a really good idea. And remember, there's an air defense aspect to this as well, where sometimes, it's a lot better to shoot the archer than the arrows. So you do have the Air Force, with their F-35s and F-22s in Alaska, pushing forward with E-7s, E-3s, or wherever we got, and tankers to try to take out the adversary before they can launch cruise missile strikes to the keep the Guard...

Mr. Riki Ellison:

Going back to both your points, where is the secretary of defense and DepSec? Are they going to name the lead architecture and the lead service? So we've agreed the MDA would be the lead architecture, but who's the lead service?

RADM (Ret) Mark Montgomery:

If I were the deputy secretary of defense and I want to unfence my travel money, I'm going to name the lead architect the MDA. I think what I have heard and I think Ty agrees, too, with the Guard is something that you develop into, rather than say it, then have Congress immediately go approve it...

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RADM (Ret) Mark Montgomery:

And then General Hokanson spends the next three months in a circular vortex, trying to prove why he could do this manpower wise and everything. I think you name MDA, because MDA can prove why they're the right people. They can say, "Let me introduce you to my research and development team. Let me introduce you to my acquisition team. They can go to my test and evaluation team." MDA is ready to be the lead system architect for this. Name them, move out, and then take a few months to do the proper studies.

Mr. Riki Ellison:

You get in trouble with that, because then you don't ... the services, they're not going to buy into this. They got to be told to do this. You get-

RADM (Ret) Mark Montgomery:

But if they're told they're the lead system architect, we will determine the-

Mr. Riki Ellison:

No, no, not the lead system, I'm okay with the lead system architect, I'm talking about the lead service to get this thing out.

RADM (Ret) Mark Montgomery:

Again, you take three or six months, mathematically prove what I postulated and then announce it. I don't think this is that complex an issue. I'm not sure why it took a fencing of funds to make this happen.

Mr. Riki Ellison:

Ty, would you comment on that, on the last part?

Lt Gen (Ret) Jon Thomas:

Yeah. The sequential order that Mark's talking about, I support. When it's all said and done, we need to realize and remember that this mission is going to require a joint effort. And what do I mean by that? I go back to, "What does the effects chain look like?" And it starts with the space force. None of what we've really talked about. And they're certainly not going to be the lead service for missile defense of the continent of the United States. But their OPIR infrastructure, the STRATCOM infrastructure, all those things are key parts of being able to close that effects chain against the inbound weapons and/or the bombers or wherever they're coming from, subs for that matter.

Lt Gen (Ret) Jon Thomas:

And then there are going to be services that have key elements. There's going to be somebody who has a majority of it. And in our discussion, I think the majority of it is going to be US Army, in terms of the land based elements to this, both sensors and effectors and command and control.

Lt Gen (Ret) Jon Thomas:

But if we were to say right away, "Oh, boom. This is the lead service board in addition to MDA." We are going to miss the fact that at the end, we're still going to be a joint effort and all of these various elements of the architecture are going to have to link together. So I think if I were to give some advice for the DepSec as they make the announcement would be to say, MDA is going to lead the architecture, the acquisition and procurement of these systems. And we are going to have services that are all elements, that are responsible. There's going to be one that's probably the biggest and if she's willing to say yes, but otherwise defer that decision until later. But make the point at the very beginning that missile defense is a joint enterprise, it's also layered and that drives some of the jointness as well. And then let the development effort go and the fielding go forward.

Mr. Riki Ellison:

Just one more before we answer questions, Mark. Why do you think this is driven? Is this driven because of the money and attention going to Guam, that the US wants to have the same thing, Continental? Is it driven for the deterrence of our bases up in Alaska, where we have our F35s and F22s unprotected, what's driving...? Now, you said this, what is driving this the most that we're getting this type of attention? It is Ukraine that's doing this, what is it, from your perspective?

RADM (Ret) Mark Montgomery:

I think if you read any national security strategy or national defense strategy, it does start off by saying, "And our first responsibility is to defend the Homeland." This is the defense of the Homeland. It is a priority. I will tell you NORTHCOMs J3 probably doesn't think to himself every morning, "Hey, I'm first guy at the trough." He doesn't feel like he's treated that way. But the reality is when there's a legitimate threat to the Homeland, the Homeland will be defended. Our adversaries have detected an asymmetric advantage and a vulnerability on us and this cruise missile of defense capability. It's a tough thing.

RADM (Ret) Mark Montgomery:

Look, I don't want to get into all the ideas of strategy and nuclear weapons and conventional weapons. But I'll just say launching weapons that can be conventional or nuclear tipped at us, as part of a strike is a risky maneuver. Doing that to any nuclear armed adversary. That's why we're not transferring ATAC of missiles to Ukraine. That's why we're being clearly of vulnerability. We have to at least protect those important operation centers, forced generation centers, that allow our military to succeed in war time.

RADM (Ret) Mark Montgomery:

And so we have to develop this. I do want to say Ty's exactly right. This is a joint thing. There'll be E7s, F35s, F22s, there'll be possibly DDGs looking for Chinese and Russian submarines. There'll be all kinds of things for the space force that we mentioned. And then there'll be this preponderance of people committed to an effector based solution to the cruise missiles coming in. And that's where we say it's some kind of army, national guard mix. At that end game. And so that's what I think we're getting at, but Homeland defense is the guiding principle of US national security.

Mr. Riki Ellison:

You want to do a couple questions real quick before we close, or do you want-

RADM (Ret) Mark Montgomery:

Sure. We can take two? I think we got time for two questions before the top of the hour. I'll go ahead and read from them. And the good news is that most of the questions were previously asked by you, Riki. I think a lot of the people who participated in here had the same issue with how do we face this challenge? First one, and we'll give this one to Ty is; today, do you think this decision, US Homeland, many people consider Guam part of the US Homeland. For the purpose of this discussion today, what should be a higher priority? Defense of the Homeland or defense of Guam, or is this something that's hard to differentiate between? Ty.

Lt Gen (Ret) Jon Thomas:

Yeah. I understand the question. And I guess at first order of principles, those are citizens of the United States concentrated on a US territory called Guam. I don't know how you don't call that Homeland, even though it's 3,000, 5,000 miles away from the continental of the United States. That said, the distinction to me is mostly irrelevant, and here's why. Guam is so important to war fighting in the Indo-Pacific that we have to defend Guam just as an operational level, war fighting imperative. If we don't defend Guam, it doesn't mean that we don't win in the Pacific if there's a big fight, it's a lot harder. So let's defend Guam.

Lt Gen (Ret) Jon Thomas:

The fact that we're defending Guam for an operational level imperative for war fighting, defends the American citizens on Guam as well and the territory. And so we get a two for one on that one. The idea that there's a choice between missile defense and the Homeland and missile defense of Guam and we only have so much resources to do both. I go back to the point you just made, which is what's the number one mission of the United States Armed Forces? Defense of the Homeland. We will find and have to find the means to be able to do that, and it's in both places.

RADM (Ret) Mark Montgomery:

I agree completely. The second question, I'll start it and then this will be the last one. And then you can jump in on it. Does US currently possess adequate defense capability against hypersonic weapons developed by Russia and China? Do they have the same or better weapons systems? And I think that's a great question, because what you're hearing about in the press a lot is hypersonic strike, the offensive end of it.

RADM (Ret) Mark Montgomery:

Russian and China are developing them, rapidly. We're developing ours rapidly. And I don't know, its very hard and unclassified, I don't know "Whose doing best?" I imagine all three of us are doing well. Let me make it clear though, all three of us are doing better than our hypersonic defense, because we've been very slow to come to this. So what I would say is we have limited hypersonic defense capabilities against the broad range of threats developing, we need to develop increased hypersonic defense capabilities.

RADM (Ret) Mark Montgomery:

And in that regard, that's where missile defense agency... I mentioned this early on. Their prime directive needs to be research, develop, test evaluate, and then eventually low rate initial production, a hypersonic defense capability for the United States. And the most dangerous thing I can imagine is an authoritarian regime, which generally has that first mover advantage. Believing they have a hypersonic strike capability that you can't defend against. Then it becomes very hard to deter them. If they believe

they have something for which you have no defense, deterrents outside of the threat of nuclear weapons, becomes a very challenging thing.

RADM (Ret) Mark Montgomery:

And therefore it is imperative that we get on the hypersonic defense. And not just that our offensive hypersonic match Russian and Chinese development or exceed it, but our hypersonic defense begin to match Chinese and Russian. The good news is I do have faith in missile defense agency. They have proven track records of numerous successful systems. I get they've had one or two, like Nunn-McCurdy, avert your eyes breaches. Or they've had problems of acquisition meeting aspiration, but they've also delivered again, and again on highly capable systems that defend us today. So I'm counting on them being successful in the hypersonic defense thing and closing that gap and restoring deterrence.

Mr. Riki Ellison:

Thank you, Mark. Let's just wrap it up. Ty, you want to give us a wrap up on what that recommendation or how you would shape this big decision coming forward from your perspective and from this discussion?

Lt Gen (Ret) Jon Thomas:

I think we covered the waterfront pretty well. I guess what I would close with is that you always need good leadership, you need a decisive leadership. But this is particularly a time on missile defense and cruise missile defense, because it's one thing about acquisition procurement, it's another thing about employment and sustainment. And if those that are responsible for employment and sustainment of a capability, aren't doing it, something needs to change. And often that can only come from the Secretary of Defense giving guidance direction and if necessary redirecting resources. So I hope that that comes with the momentum that's been created here with the support of the Congress. Whether it's been on hypersonic, it's a relative new thing, but I would argue that we dithered on this problem set for a good decade or two and it's time to stop dithering. It's time to move. That's what I'll wrap with. Over.

RADM (Ret) Mark Montgomery:

All right. I'll just say, I agree completely with Ty. And I look forward to Secretary Hicks saying that the missile defenses agencies, the lead system architect for the Homeland defense against the cruise missile threat. Thanks, Riki.

Mr. Riki Ellison:

Thanks, Mark. And this is an exciting time. This is huge, as we go forward with the defense of the US Homeland. We've got to get that 2% of the budget, instead of the one and a half percent. And rather call this the Department of Defense, the department of our Homeland and this is where the resource is, I think the populations of our country want this. This is undeniable from the public support for this. We haven't had this opportunity to get this done, and that is huge for all of us.

Mr. Riki Ellison:

So I congratulate the Department of Defense for getting urgency on this decision. And certainly we know the NORTHCOM commander is 100% behind getting his requirements done through this. So we're excited about it. Have a great weekend and look forward to seeing you next time we're up for another discussion. Thank you, gentlemen. Well done.

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