

What The Heck Is Going On With The Defense Of Guam?

Riki Ellison, Chairman Founder MDAA:

Good morning, ladies and gentlemen from Alexandria, Virginia. I'm Riki Ellison, the founder and chairman of the Missile Defense Advocacy Alliance, it is 22 years old yesterday so we're celebrating that, but our sole mission is to make this world and our nation safe from missiles and you can see the world as we see it today and the proliferation of that threat continues to evolve and we must evolve with that. This is our 61st Congressional virtual Round Table. We're debuting our newest member, JD Gaaney, on this and we have a phenomenal topic it is about Guam and "What the heck is going on in Guam". I'm from the Pacific and my grandfather was the chief medical officer for the British Empire under King George 5th and King George the 6th, he got a order British Empire for his service there by Queen Elizabeth my great- great-grandfather was the chief of the nahu tribe in New Zealand the largest tribe in New Zealand the majority probably 89% of the South Island. I'm embedded from the Pacific for an open free Pacific. We are being challenged today, yesterday, tomorrow, by China in its tactics not to make the Pacific free not to make the Pacific open and has been going after islands in the Pacific and just most notably the Philippines their bullying tactics their intimidation their influence and that may be the tripwire more so than what's going on in Taiwan and Taiwan is being intimidated every single day. So the post the deterrent for the United States in the Pacific is its furthest territory in the Pacific it's Guam and that's where we are able to project force from our airstrip there from our Port there from our submarine base there for stability for open and free Pacific. There's no doubt that Guam has to be defended it has to be defended to ensure that we continue to have status quo the way it is today to do that and Guam has to be defended against China, it has to be.

We've been part of this movement, and we go back to April 13th when we were leading the advocacy we're a do-tank we got in there on the 13th of April to put our first that battery in place on Guam which was a fight for against North Korea. We've held six missile Defender the Year events in Guam over those years and in 2016-17 Harry Harris, the former commander of indopacom or Pacom, moved the direction from North Korea to a China defense ask and that came up through the Pacific Defense Initiative and it's so fortunate JD was part of that movement and Mark Montgomery was in under Senator McCain's set arm service committee that began to put forward that advocacy and got it in play and Tom Goffus replaced Mark to a \$4 billion infrastructure build for the defense of Guam. That was in I think 2018-2019 and JD you'll clear that up on top of that. But here we are and I was on the hill couple days ago and ran into the to the milcom subcommittee and they're telling

me Ricky that they said the bill for Guam is now \$60 billion and I know we have a hurricane repair but that is a far jump from \$4 billion and I know so we got to get a little grasp on what is going on here because that bill does not look to go down is only going to look to go up and we can't walk we're not going to walk away from this we have to have the defense there.

So we got to look at this and it might not be the best picture but we got to come to terms with this and figure out how best we can do it we've heard the the head of China, Xi [Jinping] say he is ready he wants his military force to be ready by 2027 to take Taiwan. Last week we saw a Mach 9 missile that was undefended going right into Israel. And that technology is coming from China.

There has to be capabilities to defend against the best threats that China is developing. Our Congress, we're not even funding a Hypersonic Glide defense or completing a Hypersonic Glide defense until the mid-30s so we're building architecture without that right now. I know you got to start places but there's a lot of things here that are concerning and that we got to get on the right track. So this is about Clarity of what's happening in Guam by probably two of the best experts in the world on this particular subject that we have today.

So this is our 61st virtual and we have our newest member; JD is a great addition in 2018 he spearheaded the initial defense of Guam. JD is served to the aid to the commander director of the Commander's Action Group, and that is the former Indopacom Admiral Aquino. He's a senior National Security adviser the advanced technology analyst and in these roles he has created The Joint Mission accelerator and Allied sensor integration programs and co-authored the US Indopacom integrated air missile defense 2028 vision and he has supported the realization of the Aukus Pillar 2. JD was a ship captain of an Aegis bmd the hopper commander of that that did some great testing on our sm31 B's and we are excited to have you aboard here JD and I want to hand you off. You have a more articulate history of the Guam movement and enlighten everyone on the situation as you see it. Ladies and Gentlemen JD Gainey.

JD Gainey, MDAA Board of Directors

Thank you Riki for the kind introduction. Aloha everybody Admiral Montgomery good to see you sir, be part of the team. You know you are kind of responsible for some of this stuff since you brought me back to Indopacom in 2017 after my tour on Hopper and where some of this magic has started. So, let's just cut to the chase in order to know where we're going and have a good understanding of where we are right now, we have to take a moment to look in the rearview mirror on how we got here and the principal underlying factors and decisions that got us to this place. So, I would offer National defense strategy 2018 was a significant game changer, not just for the missile defense industry and enterprise but

specifically for Indopacom. It started changing the attitude and the approach with respect to how we conduct War fighting, how we pursue War fighting capabilities, how we filled it and how we employ it. The terms competition with China competition with Russia started coming out in the national defense strategy 2018. There's an opportunity for the services to have a moment to pause and reflect on their efforts their concept of operations with respect to employment in the Pacific from that National defense strategy and that gave birth to a few initiatives and few official programs from the services. Like the multi-domain task force as an example. Marines expeditionary Advanced basing operations and MLR operating concept. The Air Force started pushing toward agile combat employment and advanced battle management compute using open architecture current Tech software integration techniques and applied that into the military domain and all that originated from the national defense strategy 2018.

Well at the time when I was at Indopacom we looked at the what the services were doing to Resource the fight specifically against China and we looked across the board and we said all right you know we appreciate all these individual Concepts right we as the jtf commander have to be able to put them all together into coherent effort and employ it. One of the main themes of that National defense strategy was execution of joint lethality right and you can't execute joint lethality without credible defense to be able to back it up. So what put us in what put before us the problem or really The Dilemma is how can we take each one of these operating Concepts that are that are biased toward putting Warheads on foreheads to produce offensive capability but all the while maintain some type of Defense construct that can provide mitigation to force, mitigation to Mission, and a mitigation to escalation right so we don't want to sit there and up employ capabilities coming from the mbtf without some type of credible defense design so that the the jtf commander at the time we looked across the board and we started thinking well we need to we need to create a construct where we bring all these different resourcing efforts and put it into some type of unity of effort and what we did was with OSD policy at the time we identified three interdependencies that each one of these joint Concepts relied upon each other to be able to execute successful missions in the Indo Pacific. Right so the Army couldn't support their lines of effort without some type of enablers from the maritime environment and the air environment right so those type interdependencies and we came out to three major ones; command and control, combined and sustained logistics, and also integrated fires.

So, let's just sit on integrated fires real quick. We intentionally looked at integrated fires not from projection of power but an entire construct of you have projection of Power with credible defense and we wanted to look through integrated fires not from commanding controlling and dictating how we resource those integrated fires but let's look at technology that can make our integrated fires effort more feasible and more relevant specifically

focusing on the decision-making process. Those that have been associated with joint commands know that decision-making process is measured in days and due to the time, space, and the threat that NDS 2018 directed us to focus on we had to change how we consumed and disseminated decision-making capability. We went after integrated fires and we wanted to look at technology enablers for integrated fires and so in order to provide a use case, Army, Navy, Air Force we can create an architecture where or a warfighting deployment model from one Geographic space where all these things come into bear and that was Guam.

When we start talking about the defense of Guam the defense of Guam or the Guam defense system was never really about the integrated air missile defense you know probability of kill against threats. This was part of a larger effort, that if we can get army navy and Air Force and in some cases some capabilities from the Marine, to operate under a common construct to make Command and control seamless and expedited then then we can step off. So that's kind of how we got to the original architecture for U for the Guam defense system um so you know like I kind of said already you really can't have offensive power and power projection without some type of credible defense design um and so you know so that's how we that's how we approached the initial construct the demand signal U to be able to to beef up capabilities on Guam started a little bit before the national defense strategy there was a tension being brought out there starting 2016 with the creation of PDI and some Indopacom requests for support but you know there was a progression of a focus and shift a focus on well you let's identify the threat let's mitigate the threat but let's mitigate the threat through a different construct so that's kind of how we got to that at that point Riki.

Riki Ellison, Chairman Founder MDAA:

JD, thank you, can you move on what the threat is, can you just talk a little bit about what the threat they're seeing on that and the capabilities that we are looking to defeat those threats from China.

JD Gainey, MDAA Board of Directors

Yep so this audience knows that China is well-versed and has a well above average demonstration of a deployment of cruise missiles, ballistic missiles, maneuvering ballistic missiles, and even hypersonics, and you can even make the argument that they have the capability to orbit the Earth with a with a FOB capability as well so there's no doubt that China has demonstrated the capability to put our forces at risk from 100 miles to 1,000 miles to 2,000 miles and the challenge is quite daunting.

So this was the first time where we had to be able to create a construct from a joint perspective to be able to hit Cruise, ballistic, and Hypersonic threats all at the same time. I will acknowledge that the Navy started working on Hypersonic defense through the c-based terminal initiative with missile defense agency a little bit before this. So they already they already recognized that the threat to the carriers through Hypersonic or the threat to even the AEGIS combatants were at risk so they started the program and so AEGIS at the time in 2018 was the only capability that was actively spending money and resources to go after all three threats; but we know that role of AEGIS is for the defense of Maritime based critical assets, so the Dilemma was well how can we pick up content capability from what the agent system was providing at the time and put it into a construct that could be land based and support land based critical assets.

Remember this is this is the Pacific right, so you have Guam with the geographic area of Rick you'll appreciate this, from Candlestick Park to Cardinal Stadium in Pal Alto at Stanford. That's about the distance of what Guam is and that area body that area is the body of what Guam looks like. Those that have been to O'ahu, Guam is one third the size of O'ahu, of course in the middle of thousands of miles of ocean. The Dilemma starts introducing itself, is this a maritime problem set because the threats are originating and approaching from the maritime space-based environment or is this a land based critical asset problem set.

So at the very beginning you started seeing arguments from those that resource these capabilities, the Army and the Navy, saying "hey, yeah this is really our mission" or "this really isn't our mission but I agree there's technology here that could be carried over"; so if what we did is we just started articulating the requirement for some entity within DOD to Resource it and remember the way we resource things in DOD and DOD 5000 is primarily through the title 10 efforts so Army ,Navy, and Air Force some agencies will be able to get a pot of money and then go out and spend it. But what we're asking to do is take some residual capability that we found that could be applicable for the defense of Guam residual capabilities in the AEGIS Weapons Systems, Mark 41 V L S, PAC-3 MSC weapon, and Horizon space-based sensors. There there's a little bit of components that are being fielded that we knew that if we picked up that residual capability we turned to different way and we put it into a package that we can actually have a, and this is the requirement, that we came up time with persistent and enduring 360 degree coverage integrated air missile defense coverage against the advanced threats Hypersonic, ballistic, and cruise missile. That that was the requirement that we stated at the time. The reason why we said [unintelligible] well it's because you know we we have assigned forces in the Pacific for missile defense that have responsibilities elsewhere into the Pacific, so we can't bog down and tax the services Army and Navy for deployable defense design to stay on Guam and persistent right that it

has to be available all the time. That really kind of takes the Air Force out of play because they don't have the gas and so forth to be able to maintain those. So that you know those the requirements that we put into.

Riki Ellison, Chairman Founder MDAA:

JD, just thinking through this right I mean, you've got the air force that can go get the shooters way in front of Guam and anything that's flying on the air or possibly on the water so there is forward capability naturally inherent and if we didn't have a defense of Guam we'd probably park four AEGIS ships around Guam to defend that. So that's a reality, I believe that's true that we have air superiority to be able to control where those things launch from, not from China, but closer in that. So that aspect is already there. The reason [for the defense of] Guam is I think we didn't want to put four ships in charge of it. We wanted to create a supplement defense capability there that would be able to layer that out from those other systems that are out there. You also didn't talk about space because space is an integral part of this. So, if you could just comment on that.

JD Gainey, MDAA Board of Directors

Well to those points, I kind of mentioned it, the way we defend Guam right now is we have to tax the Navy, the BMD and AEGIS destroyers, to be able to provide [unintelligible] engage ability. We also have to tax the available minimum engagement package through Patriot to be able to deploy. Those are already baked into our campaigns well with the National Defense Strategy 2018 prescribed and the operating concepts created an additional demand signal for dispersed operations throughout the Asia Pacific. We were no longer just going to adhere to very specific centralized operating constructs, the idea was to get out and change the calculus for China, so let's provide more opportunities to project power from different locations. Well, you have to have an associated defense design with that, in order to do that you have to have the ability to take the already assigned missile defense packages, either Air Force based, Army, or Navy base to be able to go and support that.

So the whole point behind the defense of Guam was to alleviate that tax on what already available for the commander, and I will say at the time you know...

Riki Ellison, Chairman Founder MDAA:

It's become more expensive, it's become ridiculously expensive

JD Gainey, MDAA Board of Directors

Oh yeah absolutely

Riki Ellison, Chairman Founder MDAA:

So, I mean you can do 30 AEGIS ships for the cost of this right now.

JD Gainey, MDAA Board of Directors

Well yeah that's always [unintelligible], I'm sure the Navy would like that. But the reality is in 2018 our very first response was in order to do this problem we have to take the line of sight and horizon out of the discussion, you got to go space. But at that point in time, it was too expensive and unachievable to be able to do space based integrated air missile defense. You know I would offer and we could talk about this at the end of was moving forward I think we should go back in and challenge that assumption, because what we're doing in space what we're putting in space the throughput that we have of capabilities going up in space should change the way we approach the defense of Guam. But not just the defense of Guam, really the defense of mobile critical assets or dispersed critical assets throughout the Asia Pacific. Just remember Riki this is a different construct, and a different problem set that you have in Europe and Africa and so forth. The Pacific is the only area of operation that is primarily based through the maritime environment with land and Air Force in space supported on the periphery everywhere else it's either a land Centric or an air Centric effort with the Navy support on the periphery.

So, you know the idea behind what we do is let's not throw capability or try to force capability things that hasn't done. Let's go after how we approach and integrate and define really define an architecture first before we start throwing you know sensors and weapons on top of it and again that was part of....

Riki Ellison, Chairman Founder MDAA:

Are we doing that or are we doing it the other way around?

JD Gainey, MDAA Board of Directors

If you look at the capability roll out for delivering content on Guam, I don't think the government's going to start looking at integration in architecture until 27. Which for us like at the time like no you go after the architecture first. I'll give you an example right of a successful effort where you focus on architecture first and then you add the sensors and the effectors on it and that's what the Australians did with their Air 6500 program. For those aren't familiar it's essentially how the Australians are jumping into the next generation of air warfare and air defense. In the very first effort that they went after, the Air 6500 program, was going after architecture, battle management, how they're communicating decisions, not just at the operational level but promulgating those decisions out to the Tactical Edge. So, you know either you fit into this architecture, this data rich, centric architecture and play within it or you're not going to be considered. They progressed on Air 6502, 6503,

started adding expeditionary launchers, expeditionary sensors, air domain, space-based domain, as part of that original foundation.

So, at the time we're like hey let's take a lesson learn of something we know that works and it's a good approach especially having desperate type capabilities [unintelligible]. So yeah, if you get after the architecture, you figure that out first...

Riki Ellison, Chairman Founder MDAA:

On all that and the bridge with the three different services; with the Navy the Air Force and the Army with that.

So, the point the jmtc bridge is software, right it's about 85% software, so this is not a hard problem set to the integration. There's just no resource or somebody in charge to go after the integration across the entire board. MDA has that responsibility but it's not going to be pursued till 27. So, if this is a software problem, which it is, well you know there's other entities within the Department of Defense that can take a swing at that pitch. The Chief Data AI office is one, DIU is bringing some commercial software integration techniques that we have found through other initiatives of being very successful as well. I would just say that you know there's things that we can start accelerating right now that can do no harm in fact enable the delivery of content.

Riki Ellison, Chairman Founder MDAA:

Thank you, JD. Ladies and gentlemen, I'd like to introduce Mark Montgomery who was the J3 for Pacom and who was on that Senate Armed Service Committee under Senator McCain that initiated that first four billion into the PDI, Mark.

Mark Montgomery, MDAA Board of Directors

Thanks, so I thought I'd talk a little bit about what went wrong. You know so, I start off by saying look as much as you know I have fun sometimes talking about picking IBCS and giving the Army a hard time, The original sin on this is the Navy. We had an option of putting AEGIS Ashore here. I think reasonably having just done two of them in Poland and Romania we knew the cost. It would be a slightly different AEGIS Ashore, but you know we were talking in the \$2 billion range. I think they would have set it at \$1.7B and delivered it at \$2.5B. And it would have been ready around now, clearly, we're nowhere near that, you know and why are we there, the Navy insisted on not having AEGIS Ashore.

They had negative experiences from Romania and Poland, I think the Chief of Naval Operations Admiral Richardson might have said the Navy doesn't defend dirt. Well, I got

some bad news for the Navy. They're defending dirt right they have some number of defensive Guam ships always on 24 up to 96-hour standby, they're routinely there defending Guam. We defend dirt. I think the other concern, his successor CNO Mike Gilday, might have had was you know it's hard to man the crews we have to use three crews to make one on a TDY rotational schedule into Romania and Poland. Well Guam is a PCS, it's a PCS that I think a ton of AEGIS sailors in both Yokosuka, Japan and Hawaii would have willingly taken. So, what would have been you know a 60 to 80 sailor team manning a ballistic and hypersonic missile defense system with a couple VLS's in two to three years. that didn't happen.

So at that point the Department of Defense, really under the leadership of Cape, a capability assignment office, not a missile defense architecture office like that's known as the Missile Defense Agency. So the wrong people at OSD were signed to this and they successfully picked the work possible solution. What they picked was a distributed network. They said we're going to defend this in a distributed way. The problem of course is at the heart of this was going to end up being an AEGIS Command Control system, and I'll just gently say you can't distribute that. So you can move your hand fast say there's going to be these launchers here, the radars and different panels here, and all this kind of stuff and you still have an AEGIS Command and Control center that's a single point failure when it's by a missile, so everything I'm about to say is obviated by that single point failure. But the idea they had was we're going to have a distributed network we're going to put the the SM-3 and SM-6 on trucks and fire them. They're doing that with what's called precision strike missiles the Tomahawks and SM-6. I would say that the original costing of that was inaccurate I don't think that's the Army's fault I think it's probably JIAMD (Joint Integrated Air and Missile Defense Organization) and Capes fault. JIAMD an office of the Joint Staff and Cape the office of OSD. I think they asked the wrong questions, got answers they liked and moved forward.

But in any case the trucks are going to have a bad time. In any case there's a distributed network, the idea is we distribute all these different capabilities all over the island, make ourself a tough target to hit, that's how the Army fights. I'll gently say the best service at missile defense is the Navy and they probably should have hung out in the Navy architecture and in the end the anchor for this ballistic and hypersonic missile defense was going to be a Navy system, a Navy radar, Navy Command and Control system, probably a Navy launcher system. Should have hung out with that, they didn't.

So I'll give you some goods and bads out of that, some great decisions were made. One they picked SPY-7, which is you know has a polarization diversity capability. That means that as we get into the more sophisticated ballistic missile threats it's going to outperform

the SPY-6 in this very specific mission. I'm not arguing whether or not it should be on every Navy ship, Navy ought to take a look at that. But I'm telling you for this very specific capability this was a clear winner radar.

So that's a good news thing, the bad news thing, they had this truck idea. Good news to correct that, Congress said oh my gosh that's crazy and they told the Navy or told the Department of Defense buy one to three VLS I think they're going to buy two vlss so at least have some missile. Something else about the trucks; means you got to create booster drop zones all over the island. Let me know what the Governor of Guam says about that. I can give you the short answer "What are you doing?". Right so you know good and bad there.

Another bad is they kind of tried to hook everything to IBCS. IBCS may one day be the best missile defense you know collaboration network ever or air defense collaboration network ever. It's not today, it is very slowly integrating individual systems in on a set path that has solutions in the 2030s for many of the important systems. So the dilly dallying with IBCS has not been that effective.

Another problem is this really changed the manpower going to distributed. If you had a AEGIS ashore with two vlss that's 64 missiles. That's a ton of missiles. It's a SPY-7 radar, it's an AEGIS Command Control, it's our best chance of defending Anderson Air Force Base and the submarine base in Guam from a hypersonic ballistic missile threat. If you had that it would have cost, you 60 to 80 Sailors period. Full stop. The distributed Network they're dreaming up has hundreds if not a thousand Soldiers and Sailors involved in it. When you do that, you then introduce [Unintelligible], you got to get a commissary going, you got to get barracks going, you got to get exchanges going, oops we got to get a school going, you know all these kinds of things kick in. Many senior officers have had a deal with this over time. That is going to be a challenge and that's what up with the cost, I don't know what the real final cost is. But it's way over the two billion for that AEGIS Ashore.

I'll give you one more example. In addition to this, you already have existing THAAD and Patriot systems, which is fantastic. The Patriot might contribute more numbers, but the THAAD does not, as it's already there. You still need a low-cost cruise missile system, and Congress has been telling the Army for a long time that NASAMS should be considered. The Russian invasion of Ukraine convinced everyone in the world, except the U.S. Army, that NASAMS is an effective cruise missile defense system. But the Army dug in and said, "We're going to deliver IFP." IFP is a system with a checkered past. It's fair to call it the "Phoenix Suns of missile defense"—always two years away. By the way, they just got another delay; it's now three years away from any kind of operational deployment. That will be news to Congress because the Army tends to tell Congress what it wants to hear, which is that it's coming right now.

The problem with IFP now is that it's so integrated into IBCS that it's very hard to disaggregate and use it as a standalone system, which I would love to see. I love the idea of IFP sitting with a Sentinel A4 radar guarding the submarine base at Guam, cued by the Spy 7 through a Link 16 signal. Even better, it could be cued by an aerostat tethered at 10,000 feet, similar to what U.S. European Command is doing in Europe, and what the Israelis do in the Near East. It's also similar to what the U.S. Army used to do to defend the National Capital Region. The JLENS aerostat was involved in an incident, and although no one was killed, the Army canceled the system. So, I gently suggest that every time we've had to make a decision here, we've ended up on the wrong side. Riki, I'll step aside now.

Riki Ellison, Chairman Founder MDAA:

What is the solution, Mark? We've got all this stuff, and we're not going to change that. How do we move forward and get this done by 2027? Can we get the right equipment in place quicker?

Mark Montgomery, MDAA Board of Directors

I'll give you a solution. It probably won't make the 2027 deadline perfectly, but it will be close. First, unless we have Superman spin the world backward and go back four years to make different decisions, I'll assume that's off the table. The very first thing we need to do is turn to the Navy and missile defense. We need both a short-term and long-term solution.

In the short term, we can't just pause everything. That's not realistic. We have a threat to our service members in Guam, and we need to protect our submarines, get them underway, and bring them back for service. Anderson Air Force Base also needs to be operational, even if it gets damaged occasionally.

The Missile Defense Agency (MDA) needs to take responsibility for ensuring we have a functioning ballistic and hypersonic missile defense system, anchored by the SPY-7 and Tippy 6. Whether you reduce uncertainty in manpower by bringing the Spy 7 into a traditional deckhouse, or keep arrays spread across the island, is up to MDA and the Joint Task Force Commander. But, if you want to make the Navy happier, put it in a deckhouse to reduce manpower numbers.

Next, get your two VLS systems (Mark 41) up and running so you have 64 weapons. Build HSC2 and ensure it works. Get Link 16 compatibility with the THAAD systems, so they communicate with Aegis and the Navy. This would free up destroyers from suboptimal

duties like defending Guam, allowing them to focus on defending aircraft carriers, conducting ASW operations, and launching maritime strike Tomahawks at the enemy.

The Army should continue its role with THAAD, which it has been doing for years on the island. If you can afford it, get Patriot there as well. Solve the low-cost cruise missile defense problem, either through a standalone IFP system by 2025 or by getting NASAMS. Cronenbourg in Norway and Raytheon are backed up on NASAMS orders, but I'm sure we could cut the line a bit (though not ahead of Ukraine).

I also agree with JD about introducing other ideas like aerostats. I'm uncomfortable with putting a Sentinel radar on a post—it's a risky scenario given the typhoon challenges. An aerostat can be raised or lowered and stored in a hangar during storms. Additionally, consider how cyber and space assets can support this. Realistically, Ricky, I think they could get this done in about two and a half years, but OSD needs to admit they were wrong. The Army has to focus on THAAD and Patriot, and then we need to push for a decision on a low-cost cruise missile defense system.

Lastly, the Navy needs to get over itself and agree to man an Aegis Ashore system. The sailors won't be unhappy—60 to 80 sailors on PCS orders to Guam won't break the bank. I think you could easily staff it with sailors from Hawaii or other areas.

That's my approach.

Riki Ellison, Chairman Founder MDAA:

So basically, you're suggesting going back to a non-distributable system because of the single point of failure with hypersonic and ballistic missile defense. The Army is the best in the world at construction on land and support, but the whole cruise missile defense mission, the counter-UAS mission, can't rely on a single point of failure. It needs to be spread out. It's great to have one part, but I think there's still a gap with cruise missile defense, with countering low-altitude threats, and with distribution. Would you agree?

Mark Montgomery, MDAA Board of Directors:

I guess you're asking if I want 90% done in two years at about \$4 billion, or 100% done in 15 years at a \$40 billion cost. I'm going with the first option. I'll tell you something else: we have good targeteers, and I'm sure the Chinese do too. They'll find the single point of failure in a distributed network. If you anchor everything in an Aegis-based system, that command and control system is going to be what you're stuck with for at least two decades. You're not going to figure out how IBCS can control a THAAD system and perform the Aegis

weapon system's job. You can put that in a PowerPoint, but the timeline for that is 10-15 years out.

By the way, the Navy isn't very interested in delaying baseline developments to go down this path with the Army. The Navy has done the worst of both worlds—saying they won't do Aegis Ashore and then waving their hand at the Army's idea to integrate this on the island. The Navy hasn't helped the Army, and the Air Force is just standing there saying, "Aren't we the ballistic missile defense commander? Where's my B2?" The answer is, you are, but we're not thinking about you.

What this situation also prevents are innovative ideas like aerostats, passive decoys, or using cyber and space technologies like JD mentioned. You can't get to those when you haven't got the basic steps, the fundamental parts, right, and even have an effector-based system.

Riki Ellison, Chairman Founder of MDAA

Okay, Mark, thank you. I want to go back to JD. JD, can you explain the \$60 billion? I know most of it's military construction, but how much of that \$60 billion is for the system architecture, shooters, sensors, and so forth?

JD Gainey, MDAA Board of Directors:

Sure, discussing the current program of record, what's in and what's out, right now what's being funded is the Command and Control center on Guam. About five Spy 7 and Tippy 6 systems are under procurement. I think three to five early operational capability equivalents for IBCS are being pursued. They're also looking at modernization for THAAD and THAAD battle management. So, that's what's in the mix right now. The cost estimate is between four to six billion, depending on the modernization the Army is seeking and prioritization of bringing in C2BMC and THAAD into IBCS, while also accelerating LOUNS.

Riki Ellison, Chairman Founder of MDAA:

The remaining amount is what we need for military construction to support this.

JD Gainey, MDAA Board Member:

Yes, in 2020 we saw that there would be a battle for land in Guam, and we created INOPACOM's Joint Task Force Micronesia. The idea was to have a senior-level official, one to two stars, oversee all the military construction efforts happening there. Space Force, the Air Force, and the Navy are all expanding, and there are lessons learned from the typhoons,

especially regarding power resiliency. JTF Micronesia was established to oversee all these activities on Guam, and the defense piece was a major part of that overall effort.

I would estimate that between 10 to 13 sites have been nominated for this dispersed architecture over a 30-mile by four to six-mile-wide piece of land. It's going to be significant military construction. Most of this initial \$60 billion cost is aimed at building the infrastructure to support all this, not delivering the actual capability.

Riki Ellison, Chairman Founder of MDAA

This is about power, right? You've got all these systems that need to be powered. Have we introduced or discussed using small nuclear reactors to power everything? They're the cleanest energy producers and could reduce a considerable amount of that cost. Is that even possible?

JD Gainey, MDAA Board Member:

It's not really a technical problem because small nuclear reactors are feasible. It's more of a political and local acceptance issue. Studies have been done, especially in Oahu, on how to use small nuclear reactors to meet power consumption demands, particularly for data centers or AI computing, which consume a lot of power. In addition to that, you've got RF generation from different radars throughout the area. For a dispersed architecture, you need to get data piped around the island, whether through underground fiber optics or above-ground 5G communications. There are multiple approaches, all of which come at a significant cost, especially on Guam.

Right now, due to the design prescribed by the admiral, you just need to get it working, and the infrastructure requirements are nearly unexecuted. That doesn't even include the Navy turning over military land to the Army Corps of Engineers. While discussions may have started, fully adjudicating it will take years. All of this is about preparing, not delivering capability yet.

Riki Ellison, Chairman Founder of MDAA:

You need that infrastructure to have the capability. What's your perspective on Mark's solution? It addresses one segment of the mission, but it doesn't fill all the gaps.

JD Gainey, MDAA Board Member:

So fun fact Aegis Ashore at PMRF went from shovel-ready to radiating from their deckhouse within 15 months, and they were conducting tests within 17 months. This was

on a military installation on an island in the Pacific, so it can be done on that timeline. It set the conditions for future developments.

At the Pacific Missile Range Facility, it's not just the Aegis deckhouse. You also have a similar topography to Guam, with a radar dish (APY-9) out there being tested. When you start adding that radar, along with the E2D, AIS, and a launcher 2.5 miles from the deckhouse, you're getting into a construct where you can create not just NIFC-A afloat, but NIFC-A shore as well when you start integrating Army effectors.

Riki Ellison, Chairman Founder of MDAA:

MDAA is going to have a test with VS at the end of this year, in just a few months, so that's happening. Going back to the bigger argument, you can't just build a capability without having the whole system in place. The Navy can't do this alone—they need the Army for the cruise missile defense mission and the counter-UAS mission. There's no way to accomplish this without joint efforts. It feels like we're on two different pages here, or maybe reverting back. How do you get this right, or what does "right" look like? Are we talking about 2030 before all of this comes together?

JD Gainey, MDAA Board Member:

The first thing we need to do, as Admiral Montgomery mentioned, is take a pause and reassess the executability of the current architecture. We need to look at the \$60 billion figure and understand that's not even the total lifecycle cost. When we account for manpower, procurement, sustainment, and training, the costs are going to be astronomical. Manpower is the most expensive piece in the long run for these systems.

The question is: Do you want a cheaper, Army-centric solution with limited capability—especially for ballistic missile defense—but with a large Army footprint? Or do you want something a bit more expensive, with a smaller manpower footprint, that can handle missile defense, hypersonics, and the full package with Army effectors? That decision needs to be made.

We need to challenge the architecture that was pushed out in the Presidential Budget for FY 2021 or 2022. Also, there's space capability we know is being worked on by Spacecom and the Air Force. We can start doing things from space if given the proper prioritization and application. Some of what we're doing right now could be adjusted, and I bet it will save a lot of inefficiencies in the current architecture. But first and foremost, we need to go back and assess the architecture.

Riki Ellison, Chairman Founder of MDAA:

JD, we've had three combatant commanders fighting for this, from Akalino Davidson to Harris, and now Pappy is overseeing it. Do you see a change in his approach to make things quicker, better, and faster for Guam, since he's the one setting the requirements for the system?

JD Gainey, MDAA Board Member:

It is a priority, and one of his goals is to get credible defense capability on Guam. I think he's going to take a step back and let those responsible for fulfilling his requirements move forward. The requirement to provide credible defense for our premier power projection hub remains the same. That requirement isn't going away, but the fulfillment will be different. I don't think the current commander will be as involved as previous commanders in specifying U.S. capabilities. He'll defer it to the people building and resourcing the architecture, even though it might not be delivered in the time frame he needs.

A couple of days ago, CNO Frank Eddie released her navigational priorities, and the top one is being ready to fight China by 2027—the so-called "Davidson Window." The Navy's priority is to get equipment, resources, and personnel motivated and ready for high-end competition, which now needs to be translated to one of the critical assets in the Pacific.

Riki Ellison, Chairman Founder of MDAA:

What about the C2 bridge that MDAA is in charge of, bringing IBCS and CSC, and the talk from the Air Force? That's going to be demonstrated soon, I believe. Is that working? Who does that report to—the base commander, or does it go back to Hawaii to Pappy and his group?

JD Gainey, MDAA Board Member:

It depends on how the theater air defense commander wants to design command and control. The JMDC bridge allows fire control-quality data to be passed from one platform to another. That made sense 15 years ago when C2 was the standard, but today, with technologies like 5G, there are commercial solutions that are a fraction of the cost, hardware-independent, and software-based. These could essentially function as an app for one of the communication paths and mechanisms for command and control. The JMDC bridge was an add-on after the baseline architecture was demonstrated, and while it's a good capability and has been demonstrated, there may be other opportunities and technologies that should be pursued across the entire theater.

Riki Ellison, Chairman Founder of MDAA:

We've got a couple of minutes left. Do you have answers to any of the questions that were asked today? I think we've covered a lot, but let's see if there's anything else you'd like to address.

JD Gainey, MDAA Board Member:

There were a couple of questions about drones and swarms—that's a force protection issue, not a holistic Guam defense problem. The services are responsible for protecting the capabilities they present, so you're talking about fence-line protection. In 2019, the chairman stated he wants to defend air bases from hypersonics all the way to the fence line. That requirement has been there, but the mechanism to do it isn't part of the holistic Guam defense system—it's more localized.

Dr. Edwards sent a question about additional systems being brought into the architecture. Right now, the architecture is constrained by the major weapon systems we've already discussed. When we start talking about regional integration, there's credible and high-end capability coming from Australia and Japan, which is why we created the Allied Sensor Integration Program. The capabilities from Japan are fantastic and should be integrated into a regional U.S. architecture, similar to Australia's Over-the-Horizon Radar. Both countries are pursuing space-based systems as well. We need to look beyond defending just a piece of land in Guam and focus on a regional approach.

And no, you don't have to be a football player to be on this panel—that's a funny one. Moving forward, while we're dealing with the dilemma in Guam, as we pause and reassess, we should start thinking about what missile defense looks like with fifth and sixth-generation warfare in mind. We're talking about kinetic, non-contact, and irregular warfare. I know that's not for right now, but in the next four to five years, whatever we do with Guam needs to remain open-ended, with an open architecture to absorb future capabilities.

There are concepts out there, like integrated air missile defense from an unmanned platform perspective, with unmanned sensors and weapons deployed in marsupial-style. There's real capability there. The question is, how do we put that capability into the context of integrated air missile defense?

We don't have to do it all ourselves. There's legitimate content from allies that we can pull in and utilize. The architecture needs to be designed to draw in future capabilities. OSD and R&D, through their Joint Fires Network program, have already brought in unclassified and SAP-level information in an open, software-defined architecture, which allows for multiple kill chains to be managed under one pane of glass. However, the architecture for Guam

right now cannot interface with the Joint Fires Network, so a bridging mechanism will be needed.

As we pause and look forward, let's be intentional in designing this system to accommodate both near-term and future capabilities. Admiral Montgomery mentioned the invisible consequences of space and cyber, which we know are applicable and need to be incorporated into this "gumbo pot" for Guam's defense. When we initially created the defense of Guam, it wasn't just about missile threats to Guam—it was about expanding missile defense into a larger, regional architecture. If we can do this in the Pacific, we can replicate the architecture anywhere else.

I'll stop there for your final comments, Riki.

Riki Ellison, Chairman Founder of MDAA:

I agree with you, but it's \$60 billion. What other countries in the Pacific can do that? So, we've got to get this right. I think we didn't talk about it, but the Joint Fires or the Integrated Fire Network is benefiting from this, and some of that construction is for the offensive side of things as well. That's part of the military construction movement out there, so that price has to come down. We can't just have one solution that's great—everything has to work together. You've got to have the whole layered team, because if you don't, they're going to find the gaps—that's what they do. So, that's got to be in play.

The C2 has to be organized and deliberately assigned to move forward. You have to bring in your allies. Japan, Australia, even Korea, and the Philippines need to be involved in supporting this. You should be running an exercise there every year to support the island, and you've got to be ready to move quickly to defend other islands. We cannot be a single point of failure.

I think it's good to flesh this out because I think it's been painted as a pretty rosy picture the last couple of years. We've got the money for it, everyone's cheering, but we haven't delivered. And if we don't deliver, it's going to pull the fleet, and they'll bring the ships back. We'll go back to the expenses we're trying to avoid. I think there's still time to look at this again. I wouldn't say rethink it entirely, but we've got to defend Guam no matter what. It has to be completely defended, so that's non-negotiable. But we've got to reassess and look at the lessons learned to accelerate things as fast as we can. We have new leadership coming in, so there's an opportunity here.

I'm thankful to you and Mark for coming in with your expertise, for diving into the details, and for telling us the truth about what's really going on. Welcome to the team, JD. I

appreciate your time and effort. Ladies and gentlemen, thank you for listening to our hour-long discussion on Guam. Thank you.