



022217 Missile Defense Advocacy Alliance Capitol Hill Briefing with Former Chief of Naval Operations Admiral Jonathan Greenert; Congressman Rob Wittman, Chairman of the Seapower and Projection Forces Subcommittee of the House Armed Services Committee; and Riki Ellison, Chairman and Founder of the Missile Defense Advocacy Alliance, on "The Navy's Contribution to Ballistic Missile Defense."

MR. RIKI ELLISON: Good afternoon, everybody. Thanks for coming. It's great to see interest in missile defense right now and we've got some great presenters today as we move forward with a new president and new administration on the Navy. I'm Riki Ellison. I'm the founder and chairman of the Missile Defense Advocacy Alliance. The Alliance was formed in 2003. I've been involved in missile defense since I was a college student with Governor Ronald Reagan in the 1980s and with Doctor Teller proving the kinetics of it.

From our perspective the Navy and the platform that the Navy gives us is that Aegis platform is probably the most powerful missile defense weapon or capability in the world throughout our services because it provides multiple shot opportunities, multiple layers, and (at this level ?) has an offensive mix as well. It's out and about. We've got 33 of them today or more that are out and about in key regions of the world providing stability.

Just as a note of interest, last week marks the 15<sup>th</sup> anniversary of the first SM-3 shoot down. That's the interceptor that they use, and we're looking pretty close, pretty soon hopefully, for our latest SM-3 intercept, which is the biggest partnership we've ever done with a foreign nation in developing an interceptor, an SM-3 Block IIA. That will probably be close to 35 tests that we've done since the beginning, and is probably the best tested system that we have in our nation today.

With that also is the great multi-mission SM-6 missile. It's probably the greatest missile ever made, that can do three multiple roles. It can be offensive strike, it can do air defense, and it can do missile defense.

We're very fortunate today to have the new Chairman of the House Armed Services Committee. He's a fellow Virginian, a V-Tech Hokie, and we're looking forward to your leadership in possibly a new direction and a new vision of a new president. Ladies and gentlemen, your Congressman Rob Wittman, Chairman of the Seapower Subcommittee.

(Applause).

REP. ROBERT WITTMAN: Riki, thank you . Good afternoon. It's an honor and a privilege to be here with you today to kick off the Missile Defense Advocacy Alliance, and I appreciate the great job that you all do. Obviously missile defense is a frontline item that we look at today. It is critical to what we must do in building this



nation's capability and capacity, and I am honored to be in a position hopefully to be part of that discussion.

My job here today is a similar one, and that is to introduce a good friend, the former Chief of Naval Operations of the United States Navy, a constituent, a gentleman who used to have to travel past my house on his way back down to his home on the banks of the Potomac River. He would from time to time ask me, when is the snowplow going to plow my road? There's a couple of potholes there. There's a dog in my neighborhood, what are you going to do about it?

(Laughter).

But besides his keen interest on local civic issues, he has had an extraordinary impact on where we are today with missile defense, understanding it intimately not only in his role as CNO but also his time as Deputy Commander of U.S. Pacific Fleet, understanding what's happening in that region, as well as Commander of Seventh Fleet and seeing what was happening in that region, whether it was the threats from China, from North Korea, and understanding the true importance of missile defense, developing our systems, making sure that technology keeps us ahead of our adversaries, understanding what the threats are out there, and assuring that we must apply the cutting edge of technology in those areas and those systems if we're to make sure that we can not only defend but also deter other nations from bad behavior. So I am deeply honored to be here today to introduce to you the former Chief of Naval Operations, Admiral Jonathan Greenert.

(Applause).

ADM. JONATHAN GREENERT: Thank you, Chairman, I appreciate it very much. I have to tell you, he is my Congressman, although I live a dual life. I live in Annapolis, Maryland, so I pay all those taxes and all that, and then I can drive down to Virginia to our other residence. I like to complain about things, but frankly I have nothing to complain about except I do need to tell you a story where I went to bat for you.

The Congressman in this little town, and I won't use the name of the town because I've got to keep it clear, but there's a little coffee shop. We stop there all the time to have eggs and get coffee. Across the street from this is where the Chairman has one of his main offices. The owner of the coffee shop is one of these up and coming places. They've got a vineyard not far away. They've got micro-brews. It's really a nice place. Okay, it's Montrose. It's a really nice place. The name of the place is the (The Other Coffee ?).

So here's the deal. They looked across the street and they said, we've got to get him out of that place. It's looking bad on all the town. I said, what's the big thing? It's the office of Rob Wittman. Isn't that good?



They said, no, it looks like a billboard. We've got to move this place on. It's got to look Virginia-like, old Virginia-like.

So I said, that wouldn't be right. This man represents you. Do you have a problem with Wittman? Oh, he's a great guy. Well, this wouldn't be right. You can't move him. He represents for you in the federal government and he's there for you.

So I just wanted you to know, I was standing up for you. They said, thanks for that and you're not a citizen here. So I don't know if I did a thing for you.

By background, I'm a nuclear submariner. I've been out of office for 18 months, there about, so I'm the perfect person to stand before you today and tell you all the details of missile defense, where it is and where it's going. But seriously, what I'd like to do is throw some things out, maybe give you perhaps a broad strategic area. I brought one prop with me to talk about defense and how if you do it right it can work well, and if you don't you're going home. You aren't going to play in the big game. And we all, this country, has to play in the big game out there.

So for those of you that understand the Navy, and I'm going to talk about the maritime aspect of it, what we do very well in this country, because it's part of what made America great and especially our military, is we repurpose things. We find other means to take a capability, especially if it's cutting edge like Aegis, we find other things to do with it. I don't know anybody in this room that was born when Aegis -- it wasn't known as Aegis then -- actually got its start. But way back when, when this great radar in its concept came into being, this issue was Soviet cruise missiles. The issue was we are going to get saturated with Soviet cruise missiles and the target is going to be our aircraft carriers.

So they said, we'll put this great radar we're developing and we'll develop the right missile, and we will put it on a nuclear cruiser because it's going to need enormous power. Well, the expense of that, manpower predominantly and everything else, got rid of the nuclear cruiser. So they said, okay, we'll take this destroyer and we'll make it a cruiser.

Of course when you put the deck house and all that -- remember that, if you're old enough -- they said it's going to roll over when we take a massive turn. Remember the big billboard radar? We put it onboard and they said, we can find things out there we didn't know we could find. This thing was going to be designed to shoot down cruise missiles.

Well wait a minute, you put the radar so high up there it's looking further up into the sky rather than the limits you can only see so far when you go up and you can't -- the aperture is such that you're not going to see things coming over the horizon. So they said, we're going to rethink this cruise missile thing, but damn, look at what this thing can pick up.



Then the Standard missile came into being and we could put them on the rails, two at a time, two launches on there, maybe even three launches: two, four, six at a time. But wait, we can put them in a box launcher and now you have upwards of 64. So you say, we'll bring on the raid, it's not going to be a saturation as much, and we can find this thing pretty far out there, hundreds of miles, and we can guide the missile into the target.

This was a massive breakthrough and it was going to protect the carrier and the carrier battle group, and we were really onto something. It is one of -- like the installation if you will -- of Admiral Rickover's nuclear power. It was one of those things, if you look at four or five key things, of innovation in our Navy that we had. Admiral Wayne Meyer brought this all into his process.

So many of you say okay, what's the point here? The point here is this system was not built from its inception to do what it is doing. In other words, we're approaching a limit. You can only fly the missile so fast. The SM-6 is awesome. It can turn and it can do a lot of things

And by the way, you can repurpose that missile as well, and we've figured that out. But you can only get a missile to go so fast because you're shooting a bullet on a bullet. So keep that in the back of your mind. Where are we going with this? We don't really know, but we have to start thinking about the future, and we'll talk about future systems in a minute.

But we took the SSBN, the ballistic missile submarine, and we made it a guided missile submarine. We repurposed it. We took a Tomahawk missile which frankly another service, the Army, wanted and they said this thing is not very fast. Typically for the Navy, we said we'll take it, and we used it for what is now the missile for land attack.

My point to you is we need to keep looking for the thing that is out there, a rail gun-like Navy thing, a laser kind of thing, as we look to repurpose things, rather than say somebody go out there and design some wama-bama (ph) thing to take us up on missile defense in the future again. We can talk about that a little bit if you want in the future.

As Riki mentioned, and he is right, we have evolved this system, especially in the maritime sense, where we go from where you're kind of thinking of man to man defense, for lack of a better term, to where we can have enough of these things on a country in a small area and we can protect it. But things are evolving and the threat is evolving very quickly, and so now it's getting harder and harder. And I'm telling you, we are getting beyond the capability of (afloat ?).

Put another way, you can only put so much power in a ship. You could go nuclear power, and you might remember -- Congressman, you might remember -- it was four or five years ago we were thinking of going nuclear again. I can't remember his name, a fine gentleman down on the Gulf Coast, the Pascagoula area.



REP. WITTMAN: Gene Taylor.

ADM. GREENERT: Gene Taylor, and we were headed in that direction for a while, but it went away. So you can only get so much power and so much efficiency in a hull. The aperture can only be so great.

So my point is, you have a float area and you have float options. It's a great option. It will be around for a while, but it can't be the only option.

We need to broaden the strategy. We need to continue to develop things like the TPY-2. We need to continue to bring in the other nations. And we'll always need the combination of satellite detection for the launch and initial indications so that we can then take this network of sensors and find out where things are going.

Now to the bullet. We've gone from the missile, if you will, from what was originally called the Lightweight Exo-Atmospheric Projectile, LEAP, to where we are today, which is as has already been said, a warhead which is fairly astounding in its ability to find and to distinguish the target, because it gets harder and harder as that target, that intercontinental ballistic missile, gets more and more complicated out there. Our capability today, 33 ships, doing well for the mission at hand, an Iran threat out there, an area threat up and around Northeast Asia, North Korea and all that, and the Gulf threat, again Iran and the eastern Mediterranean.

Those are the two that, if you will in the parlance of sports, that's playing man to man, and you can do that to a certain extent. But when it starts getting more complicated and you've got a flood, if you will, out there, you've got to figure out another process, another strategy if you will, another operational approach to this, and that's where we need to go.

The other thing that is going to complicate matters is we've got 33 ships today of the 82 large surface combatants that are ballistic missile defense capable, if you will, modernized. If you've seen the president's campaign pledges, as he has given his speeches, he spoke to the fact that we're going to move out and we're going to modernize the 11 follow-on cruisers and we're going to do it rapidly. So that's a very good thing.

So we will have all the cruisers remaining, at least 11, and most of the destroyers, or many of our DDGs out there. But, there are other missions for these DDGs. So as we look out there -- these destroyers, guided missile destroyers -- as we look out there in the future we have a multi-mission platform capable of doing missile defense when the Arleigh Burke destroyer was put into concept, when it was gestated and brought up. We were still developing this whole idea of ballistic missile defense.

So that has been an add-on to that destroyer as well. We really don't have from keel up a ballistic missile defense platform, if you will, afloat. We've thought about it



and we've actually had plans out there on the board of taking -- imagine this, and they may still be conceivably there -- taking something the size of the San Antonio-class amphibious ship, that's a big ship and has a lot of power, a lot of big diesel engines, and you can generate a lot of electricity.

Imagine the size of the aperture of a radar suite put on there, TPY-2 easily in size and you could probably double that, and you can put a lot of missiles in there. You'd have really an amazing platform to launch. You could do launch on remote, or you could use another sensor to do that, or you could use that in combination.

These things are all evolving out there as we go beyond, but my point is we are reaching the top of our limits out there and we're probably, I'd say, about 10 years from having to move on to another means afloat to meet the threat out there. So where do we go from here? What are the challenges? A few things out there, the budget.

What we need is we need to understand what the priority is. During the time I was active General Odierno and I wrote a memo. We sat down and had Navy/Army war fighter talks and it became clear to us, the generals and admirals in the room, that as we collectively are building our missile defense, our respective missile defense systems -- number one the Missile Defense Agency, to their credit, they're doing what they were asked to do, bringing for capability to the two services. But how we're going to migrate those together, along with the Air Force, was not laid out really very clearly as strategy.

In other words, what's the priority and what have we done here? When are we done putting the architecture that we have out there for the overall missile defense? Is national missile defense number one, a ground based interceptor, is that really number one? The budget didn't show that. And who is responsible to develop that and make sure that gets in place? That was really not clear.

For us, how many of these destroyers and cruisers that we're building have to be missile defense capable? It's not really clear. They said, you just keep building and bringing them out here. That was what the combatant commanders wanted. So we really do need that strategy so that we can prioritize the budget.

All indicators that I see and I read is that the MDA budget will increase under this administration. It's about \$7.5 billion now, probably another billion, \$1.5 billion, maybe \$2 billion towards that. The Department of Defense has been tasked to put together a missile defense strategy. That's a good thing. That has been sitting out there, and I know the Congress has asked for that for quite some time.

We need a priority. The priority is of a budgetary nature. We need the priority.

We need to understand what the handoff is going to be from system to system. In other words, when MDA brings it to the service, how is that handoff going to be and what is the agreement on the support of the system and its sustainment? Right now it's



too shady and it's too episodic, depending on the systems. We need a better architecture to compile that so we can plan the budget more clearly for our missile defense systems within the service.

We need to understand the international burden-sharing. What we have today is in the Asia arena we have Japan and the U.S., especially now that we have the defense guidelines that Japan just put in place, able to do ballistic missile defense patrols together and support each other. In the past, that was not the case.

I think it is right out there for us to be able to do that with Korea. They have the ship, they have the radar, they just need the weapon. They have the command and control. We just need the rules of engagement and we need the weapon, and we can do that.

When you get into the European arena it gets much more complicated. I had several talks with the First Sea Lord to bring UK ships, especially when they bring their new destroyer in, to be able to do support for our ships that need cruise missile and ship defense. I think you call it linebacker. Is that what it's called, when a ship supports the defense? I don't know, is that what that's called when you have the linebackers supporting it?

MR. ELLISON: There's a lot of different terms, sir -- shotgun.

ADM. GREENERT: Shotgun linebacker. Remember when I said the Aegis radar looks above the horizon and has difficulty, some of the newer systems will accommodate that, or the newer aperture, but you need another ship there to support the ships that are on patrol, to defend it. If we can get in the NATO arena ships that come out that have the right weapons systems, have the right sensors and have the right rules of engagement, you can go on ballistic missile patrols together. And that, obviously, gets more skin in the game, and when you get more skin in the game it's a better deterrent. So the point is to be able to get our NATO allies to not only build the systems but to put the systems in place and have the rules of engagement.

When you look out into the future, I mentioned lasers. It is feasible, it is viable, and in my view it is going to be necessary. I mentioned rail gun or something that is launched from that concept of using an electromagnetic launcher, if you will, as a feasible entity. The deal is something that gets out there quick enough to do the intercept when you can do the intercept, when you have a profile of the threat.

Lastly, I mentioned policy, a DOD broader policy, but also the policy about how we're going to engage this. I mentioned before that my beloved Steelers insisted on a zone defense. Zone defense works well if you don't have a lot of receivers playing area.

So the Patriots -- the Steelers looked down and said where did all of these receivers come from? They're all over the place in there. And when you've got



receivers or missiles all over the place, and you're in a zone that doesn't communicate well, that is doesn't have good command and control, doesn't have good networked systems and isn't skilled enough or with a good enough pass rush -- and we don't have a very good pass rush in North Korea right now.

We don't have a very good pass rush in Russia right now, we've been developing since the cows come home, if you will. The jury is out on Iran, although the administration has said that. Then somebody is going to be launching either footballs or missiles and it's impossible if you get flooded in that area.

So just like my beloved Steelers lost, we can't afford to lose. So in the future, policy wise, rules of engagement, command and control structure, national and international, has to be the case. We have to look at, as I kind of mentioned, the pass rush part of it.

What is the threat that is evolving and how are we going to work to limit that threat diplomatically and economically and otherwise, rather than just trying to shoot everything down that is out there? That is not going to work, and it won't take long for you to understand how we could be overwhelmed, especially in an intercontinental ballistic missile situation.

Let me stop now and we can go into an area or areas that you find more interesting or that you want to delve into here with the panel. Thank you very much.

(Applause).

E: John, before you start the question and answer period, you're absolutely right. You've got to have that pass rush. You've got the big nasty, you have the guys out on the corner that can -- that's the linebacker and the best plan in the world to do that. I think that's the left-of-launch aspect. You've got to work it all together on that.

John, I want to also mention that, as you know, he created a concept with me to recognize our best sailors, our best soldiers, our best National Guardsmen, and our best airmen. Since you did that with me, our first one five or six years ago, we've recognized 339. We've done it with 17 different allies and five different countries with all the COCOMS, so I give you great credit for that, sir, to align with the vision we have.

ADM. GREENERT: Thank you.

E: It was also great because I know a lot of us were worried about that eight star letter and we've never really gotten the full story, so it might be on us today on that lack of direction and vision that you need and we need for the military to fully take advantage of this and move in the right direction. So it was great to hear that.

We are going to open it up for questions to these two gentlemen to the left of you



and they'll take it from there.

MR. MIKE ORR (ph): Sir, Mike Orr from Raytheon, former Air Force retired, thanks for your service. In reference to that eight star letter again and alluding to your defensive story there, we're not going to be able to out kinetic them. So looking at non-kinetic options, that was also brought up, what are your thoughts that you may be able to go into here with this audience?

ADM. GREENERT: Well, I'll assume rail guns are kinetic in your context, right?

MR. ORR: Yes, sir.

ADM. GREENERT: Well again, of course you'd want to jam or spoof the systems and interrupt their command and control. As we look at modernizing our strategic nuclear systems and command and control, because my heavens we can't have that hacked into, if you will, or interrupted, we have to look at missile defense exactly the same way. We have to determine, what is the reliability feature and requirement for that?

So a quick story if you don't mind. For us in the Navy we were told -- when I was out at the Seventh Fleet in Japan -- we were told we need you guys to pick up this mission called long range search and track. We said, okay, thank you, and we had three or four of our Aegis destroyers that were capable of doing that because they had the systems, they had the missiles, and it worked.

We said, how is this going to work? How are we going to do the command and control? Where do we get the mission assignment, where do we store it. They said, use your most reliable tactical circuit, which was EHF, extremely high frequency. Its reliability was .95, which from a tactical sense, that's extraordinary for a national mission, which long range search and track was. By the way, we were going to track the North Korean missile to Hawaii or Japan and enable the ground-based intercept.

So my point to you is that stuff was encrypted but it was not protected. That's what we need to look at defensively and it's very hard, very complicated. Probably offense is easier in the cyber realm. We're very good offensively. So that left-of-launch that Riki mentioned is there. It is a capability. I would tell you it's got to be in every plan, but I don't have the personal knowledge of that and will leave the classification out of it.

MR. ORR: Thanks, sir.

MR. JUSTIN DOUBLEDAY (ph): Justin Doubleday with Inside the Navy. Admiral, I just wanted to ask what do you think it's going to take to kind of energize DOD and the rest of the government to look at some of these changes you're advocating for? Do you think there needs to be another BMD review or something along those



lines?

ADM. GREENERT: I'm sorry, look at --

MR. DOUBLEDAY: What is it going to take to energize the Defense Department to look at some of the changes that you're advocating for? Does there need to be another BMD review or something along those lines?

ADM. GREENERT: I think there does and it has been tasked by President Trump within his letter to provide, among other things, a review of the triad, a review of ballistic missile defense programs, including national missile defense and theater missile defense. I am comfortable that this opportunity will not be missed. The chairman to my right will be looking for that, and I suspect he'll want to have hearings on it. I won't put words in his mouth, but we need to pull that together.

It's all right there, it just needs to be sequenced and put into an architecture. The old saying, strategy -- we have the ways to do it, we need to clearly define the ends and the means to do it. The means will be the resources. This is what it will cost to do it at this ends. The ways are all these systems we have out there that MDA keeps handing off to the services to put in place. We need to have a clear, coherent architecture.

MR. MICHAEL BRIGHT: Michael Bright, retired. Being a part of missile defense, I've been around missile defense since the old SDIO days so I've been in it as long as Riki. The question is the handoff between the Missile Defense Agency and the acquisition between the services. The agency is not an acquisition agency, but it is being treated like one. How do you see that evolving over time and will there be funding, quite frankly, within the services to actually take on that new mission? And then how do you change the entire doctrine within the services themselves to actually accept that as a new mission area and not just sort of an add-on mission area?

ADM. GREENERT: I think that we're asking MDA to do more than it was -- which is what you're saying -- originally put together for, for lack of a better term. So I think in this strategy we need to more clearly describe the missions, function and task of the service for DOD and the acquisition community. We do it with every other system and capability.

I would go to strategic nuclear, because it has a similar sensor network. It has requirements, it's a national mission, and lay it out there and see how the missions, function and tasks align there. I would use that as a straw man, for lack of a better term, and clarify it and get MDA out of choosing which capability has more priority over the other. I think we've laid that on them unfairly.

REP. WITTMAN: Yes, I think that's exactly where we need to go. I've had discussions with the Strategic Forces Subcommittee Chairman about what we do when we look at projection forces and platforms and systems, obviously it's integrated with



other launch vehicles, the warheads. How do we take what MDA has laid out and how do we then operationalize it within each of the areas of responsibility? Right now there is sometimes a disconnect between the mission that's out there, the mission and how it's allocated, and then how it's appropriated.

What we'd like to be able to do is say okay, there should be a single focus. As to the objective, we want to make sure that that gets materialized in the authorization so there's clear lines of direction; and then make sure too that the authorization is the pathway for appropriators to go okay, this is where we go, this is how we authorize and appropriate and acquire these systems and make sure that there is crossover in conversation, in directives and objectives with that. Right now, as you know, it is somewhat fragmented. Everybody knows what the mission set is, but they're kind of waiting to say okay, what part of this do we do? If we don't do it we don't to jump outside of our silo.

There has to be, I think, a little more cross pollination between ideas, between authorization and how things are done. Then what we need to do, our job is, through authorization and then with the appropriators, to make sure we're getting resources to where they need to be to make sure that we're able to keep up with where things need to go in technology. Especially with what's happening with our adversaries, I think that's one of the big keys.

MR. BRIGHT: Do we see leadership within the services that's willing to go off and take on those mission, or within Congress that says we've got to go make this a priority, rather than before sort of leaving it to sort of catch-as-catch can? Is there a leadership that you see evolving right now?

REP. WITTMAN: I think there's conversation. I don't know that from our standpoint, from the Congressional level, that there's leadership here. I'm sure as General Mattis comes in he's going to ask, as part of this evaluation he's being asked to do by the administration, I am pretty certain that is going to be part of it. We're looking to see what comes out of DOD, as well as what we do, to make sure that we're in agreement, we're in parallel, and if we have some questions we look at those assumptions or the outcomes of that study to determine how's the best way for us to address this.

ADM. GREENERT: When General Mattis was at Central Command Iran was -- we were going through this kind of threat that Israel was going to attack Iran's nuclear sites. So he was working up a war plan for that in case that would happen. It was very well laid out recently in the press. But the other side was Iran's reaction to that will be ballistic missile launches and it will be to all the neighbors here.

So the question was okay, what is my ballistic missile defense out here? And he said well, let me talk to my components. That would be me. And I said well, Jim, we've got four destroyers there at any given time and we've got a carrier.



You know, it's not a real answer. It's not an architecture. So in typical fashion he laid down and had smart people look at that and they said we think you'll be saturated with one in return.

So my point is -- and to your point -- we have left that episodically to the combatant commanders. So now you move over to, at that time, Bob Willard, Admiral Willard and Pacific Command. His problem is a little "easier," quote-unquote, in that North Korea was fairly limited. But there was no way they could deal with a launch into South Korea.

So again, a theater said we need to look at that. Frankly, ultimately, as Korea became more of a threat in that regard, the THAAD system emerged to what you have there. But that threat has been there for a while.

My point would be, as you were describing, we need to look at this holistically and then we need to prioritize. Is it the Gulf, is it Northeast Asia? Well, how are we doing in the national mission?

REP. WITTMAN: And we won't know the numbers until you actually come up with the mission.

ADM. GREENERT: There you go.

REP. WITTMAN: And right now, the numbers are sort of all over the board.

ADM. GREENERT: And we turn to MDA and say, is there a better capability out there?

REP. WITTMAN: Exactly.

ADM. GREENERT: Do I put the money into lasers? Do I put the money in this? So we need that architecture to define the ends, what are the ways we're going to do this, and we have to come up with the means.

REP. WITTMAN: Correct.

MR. BARRY BRONDELL (ph): Barry Brondell with (UC Associates ?). I'm wondering about the changing environment and how that affects how the Navy implements its mission? I'll give you two examples. One is when you look at the Arctic area and the ice melting and now you've got a totally different situation out there. And then maybe EMP, which is probably hard to discuss in this forum. How do you see that evolving?

ADM. GREENERT: Well, it will be a revolution in looking to the North, maritime-wise. The over the poles threat we have that, we've got that down and



understand that. So this would be -- we've started on it. To my knowledge, and it's rudimentary at best, I couldn't even tell you as CNO not that long ago, I don't know of any real initiative taking into account operating in the Arctic in the case of missile defense.

MR. BRONDELL: I guess if there's another BMDR that would be a good place for people to look at that.

ADM. GREENERT: Yes. Again, if it's afloat you can take your ships up there and you can establish an architecture, a protective area and all that. You'd have to take a close look at command and control because we use satellites, and the conditions up there are more complicated. We didn't put our satellite constellations in place perceiving that we would be operating that far north robustly, so we'd have to take a look at that.

MR. BRONDELL: Thanks, admiral.

MR. : Congressman, good to see you again.

REP. WITTMAN: Good to see you again.

MR. : I know both of you, admiral and congressman, but I'm wondering if it's time to re-examine the Army's role in terms of missile defense in the Asia Pacific. Traditionally they've played a minor role, but with the increasing limits on the Navy I'm wondering whether it is politically difficult to set up or to beef up our land-based missile defense forward-based on those islands? Do you think it's time to re-examine that, the Army's role.

REP. WITTMAN: Well I can tell you, having served with Ms. Bordallo from Guam, she is quite the advocate for the Army's role there with the threats. I do think that if you look at the role of missile defense systems, obviously the Army's role with THAAD is there. We visited a number of those sites, whether they're in Turkey or they're in Guam.

The question becomes again the networked land-based systems and sea-based systems, how do you put together -- as Admiral Greenert talked about earlier -- how do you put together the fabric of what you need where the threats are and where do you make sure that you don't have any holes in that fabric? I think that's the more fundamental question.

You can look at what each service branch does, what their strengths are, what assets they have, but then the question becomes, if you look at it holistically, what are the needs? What do each of those systems and the application of those systems bring to the table? So I think you have to ask that.

And again, it goes back to the broader perspective. What is our objective, not just



with what each of the service branches do, but what's our objective and what we have to accomplish with ballistic missile systems and what we're doing to protect all of our interests around the world? I think that as we've seen, there's some pretty compelling questions that we have to answer.

We have to look at overall strategy, objectives, are we meeting them? Are the threats that are out there being properly addressed? Do we have the right assets in the right places? I would say that asking those questions are probably going to provide us the answers of where the shortfalls are, and then what do we need to do to fill those shortfalls?

ADM. GREENERT: We learned quite a bit from the -- first of all, I don't think it's necessarily an Army thing or a service thing. They'd be happy to man, if you will, the installation that is there if they're provided the assets and all. As Rob said, the capability is there. If you're going to do this right -- and you mentioned some islands -- it's hard to get an international partner to say okay, I will put the radar or I will put the missile site there, and to step forward. It's a big step for them to do that.

So we've got Romania. I think everybody in the room understands that. That's a big step for them. That's close to Russia, really close.

Poland has agreed to do it and hasn't backed down. That's a big step for them. Japan is going to do it. It's obviously a big step for them, but they realize they're right in the threat.

So to me it is really going to be who is going to step forward and allow those sites to be put there. But if put there, the power is forever. There's no limits on power pretty much and the aperture of the radar and the number of missiles. So it's quite effective.

And the near-term solution is called the Aegis Ashore because it was rapidly able to be put together up in New Jersey, there at Princeton, bring it out, and it's a pilot house with -- it's a ship out there, but this is temporary. It doesn't have the near the aperture that is needed, the power level and all that. But as the Congressman said, that's probably the future, to put in an effective zone defense. That's the kind of player you need.

MR. JOHN WALMAN (ph): I'm John Walman, a former surface warfare officer, currently working for Griffin Technologies. I just wanted a question mostly for the chairman to ask about if there's any potential or opportunity for us as a nation to work with Russia, whether it be technologically in terms of sharing capabilities, or whether it's operational with rules of engagement? In this new administration, obviously there may be opportunity. Of course, they've been threatened by our new NATO countries with Aegis Ashore and things like that. So has there been any discussion or do you see any potential opportunity for us to kind of bring a closer relationship specifically within the context of BMD?



REP. WITTMAN: There certainly is an opportunity. I would say that history has not proven that those discussions have ended up being fruitful to maintain the interest of the United States. I would say this, when you start out and the interests of both countries are very, very separate, there might be some area of crossover where there is dual interest. I think there are areas like Syria where you might be able to do some things.

But again, Russia has interests in that area of the world that are different from the United States' interests. It certainly has interests very different in Europe, whether it's Ukraine or Crimea or what I think is the next area of potential aggression, which is the Baltics. Their objectives are very different than the United States and NATO.

Now can we do some things where we have common interests? Possibly. Do we have a good history of those instances where Russia has done what they said they're going to do and doesn't continue to also pursue their own self-interest? I would say history hasn't been something that points us to say we should put a lot of faith in that.

But I do think this administration is going to try it, that they're going to have conversations with Russia. And maybe, I don't know, maybe the personalities involved between Vladimir Putin and Donald Trump are such that they can find a place where there's agreement. The key is not just reaching agreement, it's will it be substantively followed if there is an agreement? Will there be an ulterior motive to reach an agreement for some other purposes besides what's mutually beneficial for both parties? I would say this, I think you have to go into this with a very, very healthy dose of skepticism.

MR. : (Off mic) -- the Romanian embassy here, so thanks gentlemen for your comments. If I can make some comments on missile defense, coming from the nation that hosts the first installation, first this is a very important program for my country. It's a flagship for our cooperation on defense and politically. It has also a strong narrative, a strong narrative for the international community. (Off mic) -- for the alliance's capacity to adapt to emerging threats, (old threats ?) and challenges. More than that, I think missile defense is the way to address those challenges globally, regionally, and -- (off mic).

MR. : To piggy back on this gentleman's question, Admiral, I've seen this going about and in talking to different services about (transferring things to the fight ?), and there is a little bit about, we've got this piece but we don't have that piece. So where should that regional, global, national architecture build or reside in the building? Or, should it be in the building at all?

ADM. GREENERT: In my opinion, with the Undersecretary of Defense for Policy. I saw this when I was the Vice Chief of Operations, so his would be 2009. I came into the building and I got assigned to a group called the Deputies Advisory Working Group, the DAWG. It was very clear, they laid out to us in the room, the vice chiefs etcetera, and I remember I was sitting beside General Breedlove and (the chairman ?) at the time of the Air Force, and the point is it was very specific on the European



### Phased Adaptive Approach.

And so to the gentleman from Romania describing, this is how it's going to come in, this is your job, your job, your job. We didn't like it. I didn't like it because I said, where will it go? How am I going to -- you know, and MDA would hand systems off and we'd say, then what? They'd say, run them.

So we had to organize, train and equip for that. Okay, I've got it. A decision would come out and it was a fiscal decision more than it was a policy decision on how this was going to get done.

But it kind of worked, if you will, and then we got EPAA, the European Phased Adaptive Approach one and two. And we kind of had (signs on the line?) and we're carrying a momentum that these documents that I opine don't exist might be out there, because again, I've been away for a little while. But the overarching -- this is how it works and this is how this gets assigned, is missing.

We have a very structured approach of an item called the Global Management Force, GMF. They have a global distribution. It is down to a nat's eyelash, or however you want to say the other end of a nat.

If you sent a DAWG team out to Bahrain, the Secretary of Defense signs off on it. But it is missing in that regard. The strategic nuclear is obviously very clear.

So my view is that needs to come out of the policy arena, be laid out, and then hand it over to the operations director on the Joint Staff and the planners, and say okay, folks, here is the strategy. Here is the lay down you're provided. Here's the money. Here's the requirement. If it's not in balance come see the deputy and we'll figure it out.

That's how everything else works, and for the life of me I don't see the clarity there. As Michael said earlier, it kind of relies on MDA to sort of figure this out. That's not what they do. That's not what it says they do, but they're doing it, and they're doing pretty good.

MR. : Sir, do you feel like it's another one of those emerging missions like ISR, slow motion ISR that just kind of evolved from, try this, and then it came into a life of its own and it never got into those conventional --

ADM. GREENERT: Yes, I think as opposed to ISR with drones and the Global Hawks and that, I think it's much more structured than that. I just think we've kind of lost momentum. We kind of pushed it, like we're running, I don't know, like a bobsled. They're running down the hill and there's nobody pushing it anymore. They're on this track and we're running out of track.

So we have got to define where it's going. The Congress is asking us for this all



the time and we send them these things which I think are too watered down and too general. We just haven't sat down and thought it out.

That was the essence of the letter General Odierno and I wrote. It's not that we came up with this brilliant thing, it was very clear. We looked at each other and said, we've got to lay this down.

So it was a difficult and disappointing thing. About the same time I said it's unfortunate we didn't get this down because it's left open now. But, you know, the president has passed it out and I believe, as I mentioned in that little anecdote for the secretary when he was a combatant commander, we kind of left them hanging on that too. It's probably in the back of his mind as we go forward. So I'm optimistic we'll get this lined out.

MR. ELLISON: Thank you to both you gentlemen. It's an appropriate time for the vision of the architecture and for you to be a Congressman and oversee the \$2 billion and possibly plus, and make sure we have an end for where that money goes.

Obviously, we have a game on Sunday. You're right, defense wins, but -- (off mic).

(Laughter).

Thank you. Our mission, obviously, we believe that missile defense makes this world a safer place, makes our nation a safer place. We've been advocating for that. We're nonpartisan on that.

We're off to Japan on Monday. We're going to be seeing the Seventh Fleet and we're doing the Japanese Defender of the Year with both the Japanese and our sailors over there. Then we're off to Korea. I'll be at the DMZ next Thursday. Hopefully the Leader will not be testing missiles.

We'll probably do another Congressional roundtable when we get back. Thank you for taking the time out of your day to listen to some great experts on sea power and our Navy. Thank you very much.

(Applause).