Virtual CRT Navy and the Golden Dome

[Mr. Riki Ellison]
Good afternoon, ladies and gentlemen. It's a beautiful day here in Wiesbaden, Germany. I'm here with the Army and the Army Euro Conference here in Germany. It's a sunny, beautiful day. Welcome. It's a good morning to you in Virginia and the United States.

We're excited about this opportunity to bring in the Navy and highlight the best of what the Navy has done with missile defense and their inclusion or non-inclusion with the Golden Dome. That's what I think we're going to be hitting up today on this. I'm Riki Ellison.

I'm the founder and chairman of the Missile Defense Advocacy Alliance. We were founded 20-plus years ago, and we've been involved with missile defense for 40 years. We are just solely here to drive missile defense capability and capacity across this world and certainly around our nation to make our world and our nation a safer place.

I just want to start off with today, we had the opportunity to listen to our new Allied Supreme Commander, General Grynkewich, who spoke to about 2,000 people this morning. It was wonderful for him to express how important the joint force is, the combined force is in the plans that he has set. I think it's the first time in probably 60 years that they have executable plans to move forward.

Most importantly, he listed air missile defense as the number two priority over fires for his command here in the U.S. He's setting the pace. We have historically, me personally, and MDA personally, the Navy has always been in front of this, in front of IMD, in front of missile defense, certainly because there was an ABM treaty that was put in play that restricted a lot of services being able to do much. Navy exploited that, especially in the late 1990s.

With Admiral Meyer, as they were able to do things that weren't allowed to be done in the treaty, I believe, and to be able to really create the best 360-degree IMD capable platform in the world today. There's nothing like it, nothing in the world like it, to be able to shoot all the way down from the sea all the way up to space. It's been step by step.

It's been a great development over the past 20 years. We were certainly part of this with Daniel Inouye and helping create that PMRF, Pacific Test Range, where most of this development was tested out of there. We're seeing how important the Aegis BMD Navy ship is for the defense of our land. We can start right off here in Europe. We can start right off in Rota, Spain, where there have been four ships assigned to the defense of Europe. Certainly, those ships have been a big part of defending Israel.

Israel, Europe, and we see the two Aegis Ashore Sites here in Europe, defending Europe on land. You can move right over to the United States. We know the North Combatant Commander has the right to pull in any ship he wants, if he has to, on both coasts. And then you go right into Guam. Guam today has ships assigned, I believe, to defend Guam. And then you go into Japan and the Japanese Sea, we'll put ships in there to defend against North Korean missiles.

So the Navy has been absolutely prominent in land defense and advancements on their ability from C-RAM all the way to SM 3 Block II to shoot things down in space on that. We have seen the Golden Dome unfold. We're all watching it.

We've seen huge movements by Space Force, by the Air Force, by the Army on it, but we've noticeably not seen Navy step up. Maybe that's a culture and that's kind of what I want to explore. What is the Navy's role with Golden Dome? Why have they been so quiet with this? Or is it assumed that they're going to be doing the same roles that we're doing? We certainly know that some of the weapons will be used in commodities. Some of these SM-6s and SM-2s will be used. But that's where we're at.

This is our 80th virtual Congressional Roundtable. Very fortunate to have all three of our guest speakers, Navy, all three of our speakers, captains of Navy ships, two of them are BMD ships. So, we are very qualified to lead this off and get into this. But I really want to push this.

Why isn't the Navy more engaged with the Golden Dome? And should it be to do that? It seems like we can, if we want, to put ships right out there right now to defend our major population centers. And we can do that right now instead of waiting for three years. But I'll let the conversation go forward and we'll start off with the former captain of the USS Hopper, our J.D. Gainey, our board member, J.D., all yours.

[Mr. J.D. Gainey]
Thank you, Riki, for the introduction and to join us here. Admiral Druggan, Admiral Montgomery, it's great to join you guys for this panel. All right, Riki, you asked me to give some thoughts on where in the world is the Navy with respect to Golden Dome? And I got about four points I want to bring up. The first one is, like or not, the Navy is where they are supposed to be. Forward, protecting our national assets.

That's what they do. I mean, by Constitution, that is their job. Get out, get away from the homeland and ensure that our national interests are deployed.

What is that role with respect to Golden Dome? I'll get to that in a little bit. But when you look at the posture, and you mentioned some of the locations where the Navy is operating, 24-7, the response time to be able to be in a position to create an effect, in this case, knocking down ballistic missiles or cruise missiles or drones is impressive.

Nobody else in the world can do that. All right. So when it comes to what they are supposed to do, the good thing is they have the capability, they have the tech, they have the experience to do it.

The bad part is, as you've mentioned, the technology that has enabled them to do that really hasn't migrated over to the other services using the techniques, the practices, the training, a piece of it. I know when we first created the Guam Defense System, our J3 at the time, Admiral Koehler, went to D.C. and started talking about, hey, if we started incorporating land-based defense, what would that look like? And some of the response was like, yeah, it makes sense.

So we'll make room for them at Dahlgren for Aegis schoolhouses, but we're not going to take over the mission, right? We'll be happy to train, we'll be happy to support, we'll be happy to do the cross-polarization support if the Army wants to come in and be part of that design. And it was very clear at the very beginning that there was no interest from the Army side or even the Navy side to start taking on each other's missions.

So that's the bad part about all this, is we have not had the ability to cross-thread some of the capabilities. I will put an asterisk on this, is recently within the past year, OSD, Acquisition & Sustainment, A&S, has created programs for the PEOs, the acquisition communities, to cross exchange ideas and even technology across the service teams. And I think there's even a little bit of money associated with that.

So with that authority in place from an acquisition side, you should start being able to see some traditional Navy procurement cross over into the other services. The second point I want to bring up is the mission side of this. Golden Dome is not going to be a home game.

Golden Dome is an away game, either the left of launch, mid-course, and even the platforms that enable cruise missiles, ships, submarines, or even aircraft. All of that is an away game. If we started talking about terminal defense for Golden Dome, we've already conceded that our continental shelf, we've already conceded the battle space that we have established right now.

That includes the space-based capabilities. So when I hear some of my counterparts within the Pentagon and the Navy Wing start talking about, hey, we're not in the business of defending dirt. We don't do critical land-based asset defense.

I kind of throw it back to them and say, yeah, maybe you say that, but your actions are, as we've seen the past few months, you are defending dirt. You're defending Israel. You have been in a posture to support the defense of Qatar if you needed to come over the top.

And even when you look at your training practices for ballistic missile defense certification, you have a requirement to demonstrate proficiency in the defense of Israel, the defense of Japan, the defense of Korea, the defense of Hawaii, the defense of the homeland, defense of Alaska. So I hear the general narrative that we don't defend dirt, but in practice, in real time, in order to keep our national interests safe and secure forward, you have to be out there conducting this. Another reason why you kind of see the Navy absent in all this dates back to Chief of Naval Operations Admiral Burke.

And I'm sure Admiral Montgomery is going to check my rudder with this if I'm wrong, because he knew Admiral Burke personally. He decided to take on the mission of using the nuclear submarines as part of the nuclear deterrence triad. He was anticipating, go back to history, he was anticipating the top obligation authority, essentially the Navy's budget referred to today, would be increased.

He would get a plus up. We'll go out, we'll take on the nuclear deterrence strategy mission. So therefore, we should get some more money.

That didn't happen. As you know, like the Columbus class nuclear submarine, that's coming out of Navy dollars. That's not coming out of the Navy, the national command authorities, nuclear command and control, a lot of money, because that doesn't really exist.

So the Navy had to take that out of hide. All right, let's fast forward into the recent past. Admiral Roughead, when he was CNO, he volunteered and he raised his hand, hey, I'll support the European deterrence initiative. And now you have two very capable Aegis Ashore locations out there. Well, guess what? That's coming out of Navy's hide as well.

So at no point in time did the Navy get an increase in their budget to be able to support what many will consider other people's missions and other people's responsibilities. So rightfully so, they're a little gun shy of taking on land-based defense requirements, like for Guam. One of the primary reasons why they walked away from Guam is, hey, they're already providing three to four ships to protect that thing as is, and now you're going to put an additional tax on the Navy for an Aegis Ashore-like capability on Guam.

So that's the reason why that they've been walking away from this. Another reason why the Navy has been hesitant on advertising Golden Dome, it's probably because where the Navy has demonstrated success for integrated air missile defense, the other services haven't seen that. And so when you look at the technologies and the demonstrations of upper tier, lower tier, simultaneous engagement, the Navy's been doing this for almost two decades.

They've been using a capability mix of aircraft, space-based capabilities, and maritime ships for 10 plus years, right? And you can even make an argument that they are leading the way, utilizing more space-based capabilities for holistic kill chains through some of their activities, using space-based sensors to space-based communications down to the maritime environment. So the Navy has been leading the way with respect to advancing the kill chains.

And if you take a look, my final comment on this, if you take a look at where the Navy is going, they're outpacing what the services are doing with respect to how they are maturing advanced concepts to incorporate operational mode. I'll just give you a few examples. The Navy's chief technology officer, Justin Fanelli, just published five basic foundations of how the Navy is going to continue to evolve into warfighting.

AI and autonomy, quantum compute for the secure data piece, transport and connectivity, enhanced C5ISR to enable more decision-making capabilities, and also the final one is cyber and zero trust. The true left-of-launch game is going to be in the cyber world, admitted or not. So the fact that the Navy, at the chief technology officer of Navy holistically, is going after some of the foundational principles that Golden Dome has to deliver shows why the Navy should be a part of this. However, the motivation to be able to incorporate into it is not there.

[Mr. Riki Ellison]
Okay, J.D., a couple things here. It looks like the Navy always has more advanced missile defense than anybody. Let's just start off with the counter C-RAM. The C-RAM was developed in the Navy on ships, and that was moved over to all our bases in CENTCOM to do a hell of a job there. Navy created that. They transferred it over.

You look at your SM-6, Army doesn't have anything like that. Nobody has anything like that. Then you can strike land, air, the whole thing, the multi-capability of that.

The Navy, I would argue, has the only hypersonic life defense capability and terminal capability right now that can be proved. So those are critical assets that we don't have, and we might not have in three years when this Golden Dome is supposed to have first IOC or first movement. Why would we not leverage the hell out of that to protect our population centers when we are already doing it on some of these islands, and we're already doing population centers elsewhere?

The President of the United States is demanding this. Are you hoping that—not hoping, I should say. Are you hoping—well, you think that we're going to have capability that we don't need to have those ships pulled in or those weapons systems put on land that the Navy has today? There's nothing—I mean, SM-3 Block 2A, nobody builds it. That's not—that's above all of that, and that should be used to help defend our nation. Go ahead.

[Mr. J.D. Gainey]
Yeah, so the Navy has always taken care of itself when it comes to protection of its own assets, right? By the nature of the mission the Navy has, it cannot rely on other services to support. Army Air Missile Defense has a strong reliance on Air Force to be able to support the command and control, defensive counter air.

So you have, with respect to other services, they have interdependencies amongst themselves to be able to provide what the Navy can do by itself. You're talking about why aren't we taking proven technology and incorporating it into the golden dome piece of it? That is a—unfortunately, that is a money conversation because the Navy or the Army, the Air Force, they are not going to pay for other services or other mission areas to be able to go and execute.

So unfortunately, our bad behaviors as the Defense—Department of Missile Defense Enterprise has stovepiped the acquisition process, and it doesn't allow for cross-training or moving money around to be able to support procurement of other folks' capability. One of my biggest pet peeves with this whole Golden Dome initiative rolling out and the resourcing of it is people characterize the capability delivery and the resourcing with respect to services procurement practices. Like, I mean, even this conversation we're having right now, we're talking about the Navy going out and buying stuff to be able to support Golden Dome.

We got to get away from that. You know, General Guetlein has to be able to sit there and go, I have the authority to reach down to each one of the services coffers and select my best of breed to move forward. Until he does that, we're going to continue on these bad practices.

Yeah, SM-6, Aegis, that's a Navy thing, and the Army is not going to touch it. I mean, the Army is not going to demonstrate an upper-tier, lower-tier combined engagement shot by another five years, maybe. And the Navy has been doing this for almost two decades.

So to your point, we are being—we're almost being irresponsible by not taking the best of breed that each service can offer to be able to provide this holistic approach for Golden

Dome. We've done it before. We've had success of taking best of breeds of different services capabilities through the joint fires network and put it under one umbrella.

A lot of burning and learning and growing pains with that. But if you look at the output that the joint fires network not only is currently producing, but is on track to produce in the next 18 to 24 months, if we apply that operational construct to the Golden Dome, we will have credible homeland defense that starts well left of launch to include midcourse, to include engagement platforms in areas outside the terminal defense, and be able to provide the American people the defense that they need.

[Mr. Riki Ellison]
Thank you, J.D., and you're on the money on this because Mike Guetlein's going to have $175 billion, and he's going to have the authorities to do exactly that. I believe. It's not there yet, but it's close. But that's what he's got to be able to pick the best of breed wherever it is for this. Okay, great.

We got another very special guest, another former captain of an Aegis BMD ship, the O'Kane. And more importantly, he was the head of Aegis at MDA in a lot of the critical development that's we've been seeing to partition what the weapons are today. So we're really honored to have Rear Admiral Tom Druggan here with us.

[Rear Admiral (Retired) Tom Druggan]
Hey, thanks, Riki. Really appreciate it. Yeah. Appreciate the opportunity to be here. You know, the words behind me spoken by President Reagan in 1983, absolutely relevant front and center today, as it's really coming to fruition with the Golden Dome for America. So honored to be here.

Glad to spend a little time talking about the Golden Dome and the Navy and the Navy's role in it. I think first and foremost, you know, the flip side as well, we don't want to build, we don't want this. The other side is, well, let's let General Guetlein get in there, make his assessment of everything, and see how he's going to do some allocation of requirements across the services or across the Joint Force, or for new things, right?

Certainly the centerpiece for the Golden Dome for America is the space-based intercept capability in the boost phase. That is, there's absolutely an emphasis on boost phase intercepts, which include left of launch. And then if something does get off the ground, let's get it during the boost phase.

That's really important. And that kind of focus will guide the Golden Dome program from my perspective. And the reason is very clear. Our weapons exchange ratio is very good if we can get a threat in boost phase. We go from, we have one missile that can take out multiple threats. We have to remember that the Golden Dome, the threat set that's involved is now greatly expanded.

It's against all aerial attacks from all actors. All right. We had a limited ballistic missile defense against rogue nations and limited attacks, right? Think North Korea. Now we're in a completely different threat set that's humongous and includes advanced threats from Russia and China. All right.

So, Russia and China absolutely have the capability to have multiple reentry vehicles on top of a booster stack for an intercontinental ballistic missile capability. That becomes really important. That's one of the reasons there's so much emphasis on boost phase intercepts in the Golden Dome for America executive order, because we have a booster, it's bringing up multiple reentry vehicles, nuclear reentry vehicles.

And if we can get them in boost phase, it's one interceptor to take out a lot of threats. Very compelling to go after boost phase. I will say we should also step back when we talk about space-based intercepts and boost phase in general. Different people have a different definition for boost phase. So, we should all agree on what the definition of boost phase is. The most common one is boost phase is from launch until velocity burnout.

The vehicle is not under propulsion anymore, the payload. You can extend that a little bit because the carrier of multiple reentry vehicles will continue to coast for a while as it reorients itself and releases the warhead so you get a little bit more time. Anyway, the point is we want to get after threats before they release multiple reentry vehicles in space.

We'll call that boost phase for this discussion. That is the centerpiece of the Golden Dome for America. As a result, it's natural for the Navy to go, well, that's definitely not in our portfolio, right? And so, let's let things settle out. Let's let General Guetlein get in there and see how things shake out. Our job, again, as your friends and allies, make sure that we have a very responsive capability anywhere across the globe.

And when necessary, conduct sea control or sea dominance and project power when and where we need to from the sovereignty of the high seas with our Navy. That's the centerpiece. You know, ensconced in law is to conduct combat incident operations at sea. That's what we do and that's our forward game and that's where we want to fight as a nation. Now, that said, the Navy does have capability and it has capability that's directly applicable to the Golden Dome. And the question here is, well, where does that fit in?

It's probably not in the boost phase intercept. It's probably not in space-based interceptors and that constellation. That's Space Force work definitely. And that's going to be the Golden Dome for America program work going forward and really bring into fruition some of the things that President Reagan and the Strategic Defense Initiative set up almost 30 years ago that we then hit pause after the fall of the Berlin Wall.

We're now in a different spot, right? The world did not get safer. It did not become less dangerous. It's become much more dangerous. Missile technology is widely proliferated. And we should also recognize that missile technology is no longer rocket science. It's now just rocket engineering. We have Jeff Bezos, we have Elon Musk, two wealthy individuals that build a space launch capability, right? There's no difference between what their space launch capability is and an intercontinental ballistic missile. The only change, the only delta there is the payload, right? Satellites versus nuclear warheads.

So, as we look at the Navy and homeland defense versus our main purpose and being of being overseas and sea control and forward presence, I think it's natural for the Navy to pause and wait and see where we can fit in.

As the capabilities, as you so rightly said, and J.D. said, we've had great integrated air and missile defense capability for a long time now. It's really put a fine point on it. And now it's combat proven, right, in the Red Sea and in the defense of Israel. We should note that those are low-end targets, right? They are not Chinese threats. They are not Russian threats, right? But we have some combat capability that's proven and we can take some lessons learned out of there and make it better.

I think the one thing that the Navy really should be interested in, because we may be called upon to do this mission, just like 9-11, we were under attack and the Navy was directed to push out ships that they could for air surveillance and air defense. We should be ready as a Navy to do that again in a ballistic missile defense context. Because when push comes to shove, the Navy will need to do the mission that's assigned to it. And that could be anywhere. As President Lincoln said, 100 years after the nation's founding, he thanked the Navy for going anywhere the ground was a little damp. And that's because the Navy responds to the missions it's given. One of the future missions that may be given in a time of turmoil is push out off our coast and provide some level of ballistic missile defense, not on a daily basis, not on a monthly basis, not on an annual basis, not as a persistent mission. But if things come push to shove, we can all see that happen because it happened before during 9-11.

In that case, we really need to understand in the Navy what our capability is against this new, larger, more complex portfolio of threats, including the Chinese and the Russian threats. We need to understand what our capability is. And we need to really go and mark ourselves and benchmark our capability against those new threats and make sure we know exactly what our performance is. And then if we need changes or we need updates or we need enhancements or improvements and upgrades, we need to get after that because we don't want the nation to call and then say, well, I don't know how we're going to perform against those threats. We need to do that work up front.

That's a very legitimate use of golden dome for American resources is to make sure the Navy can, if called upon, do that mission. So, I think at the end of the day, that definitely should be something that should be pursued. I think it's fair to wait for General Guetlein to get in the office.

I think it's fair for the Navy to not be forward-leaning, particularly since it really is an Army and Space Force mission up front, first and foremost. And the Navy will be on call. And so, we should be on watch overseas, but we'll always be on call to answer the nation's needs. And if we're called, we need to know what our capability is.
So, that's a little bit, I think, of why I think the Navy, I think they're being respectful to the Army and the Space Force and not going after the mission because it's not our mission. It's not the Navy's mission. I think they are being respectful, waiting for General Guetlein to get in the office. I'm sure there's some conversations, non-public, that are going on, on what the Navy's role is going to be. I think J.D. is correct that the Navy doesn't want to see a bunch of Aegis ashore sites that they have to man. However, you could take an Aegis capability, and we train international navies. We train the Japanese to operate, maintain, and operate the Aegis weapon system. We train the South Koreans to maintain and operate the Aegis weapon system.

There is no doubt, absolutely, that we can train the Army Reserves, the National Guard, or hopefully, the Space National Guard that needs to be stood up for these kinds of missions. And they would be plum assignments. They would absolutely be incredible assignments for the National Guard or the Space National Guard without question, because this is weapons release authority at the end of the day. Really, these are incredible systems.

The last thing for the audience, just to wrap your head around some of the language in the executive order, is there's underlayer and there's terminal phase intercept capability talk. What does all that mean?

What's special about that particular entry in the executive order is it says deployment of. It doesn't say development and deployment of like it does for the space-based interceptor capability. That's important because that kind of indicates we want those terminal phase capabilities sooner rather than later, and we should buy what we need, maybe do some software enhancements to get on with purchasing of those systems.

And so for your audience, just to think about it, Patriot battery can kind of defend a city, but its radar has a field of view, right? It's not 360 at all. Then THAAD can defend a metropolitan area, kind of DC, big DC, or Baltimore. And you can think about that as, yeah, as an area capability with the terminal high altitude air defense THAAD batteries. But their TPY-2 only has 120 degree sensor capabilities. And then finally you get to Aegis and Aegis can defend most things east of the Mississippi minus a little bit of Maine and Key West Florida.

And you have to ask yourself why? Well, in each of those cases, the intercepts occur at higher and higher elevations. Patriots are well within the atmosphere. THAAD is much higher in the atmosphere, so it can cover and defend a larger area. And finally Aegis is defending by having intercepts in space. And that's why we're able to defend such large areas.

Again, two Aegis ashore sites defending all of Europe from attacks out of the Middle East, right? The other note is, just because you want to defend a particular area, that doesn't mean that's where the missile defense will be established, right? Sometimes an offset is required. And this is where we get to this all threats from all actors. That's a really complex problem because that means that the United States of America needs 360 degrees of active air and missile defense. That's a very, very tall order.

And so that's one of the reasons the space-based interceptor capability is in the executive order, because it's not feasible to have things like Patriots, THAADs, or Aegis everywhere. So that's just a little background and some thoughts for your audience on the Navy and the Golden Dome.

[Mr. Riki Ellison]
Hey, Tom, thank you. You look great in my office. It's awesome to see that.

[Rear Admiral (Retired) Tom Druggan]
Happy to be here.

[Mr. Riki Ellison]

Hey, thank you, because I think what you just stated very clearly is reassurance to the public that the Navy will be there in three years if we don't have anything. We've got something that's going to show up. So thank you for that.

The question, I'm going to push a little bit on the Golden Dome. So I agree that space boost phase, and I believe that that boost phase is much later in the ascent phase than it is shooting stuff down, because the expense part of that is that. And they got to be pretty economically feasible and where that midcourse goes and where that boost thing goes on.

But what I believe is the data, right, the C2 of everything is the backbone that he's got to deal with before he can even get to that space boost phase capability. And what we've seen is how great Aegis C2 is. You're able to launch them. I don't think people understand that your ability to synchronize all your weapons systems under a single command and control and to use your other weapons systems from other ships and coordinating that is, I mean, Army's still struggling trying to do that with IBCS. Nobody's done that like that. And that's the C2 BMC and how powerful that is.

How do you see the Navy contributing that or is that going to fit into another?

[Rear Admiral (Retired) Tom Druggan]
No, it's a great question. And yeah, I should've addressed it a little bit. The reality is the Navy is going to support Golden Dome just as we are supporting Golden Dome with ballistic missile surveillance and hypersonic surveillance as a matter, of course, of doing our normal day-to-day routines overseas. There are radar, you know, radars don't pick and choose, you know, they actually detect and then track everything that we needed to, as long as we're properly configured and operated by proficient operators, that gives us the opportunity to provide some forward surveillance and queuing that C2 BMC. So we'll do that as a normal course of affairs.
Also, there's space domain awareness, just what's flying where. And as we deal with more things in space and things that move in space, then the Navy can support Space Force with space domain awareness, which is actually, that's already baked in.

The final thing there is the Navy being able to support the nation, right, as we need with the C2, by inputs into the C2 BMC. We should step back, though, when we talk about C2 BMC, space-based intercept capability, and cruise missile defense, and defense of the homeland against cruise missiles, hypersonic threats, and ballistic missile threats. I think we're going to have to look at this C2 issue. The thing about cruise missiles is they're flying potentially at the same altitudes or in the same areas as commercial aircraft. And we know we have thousands of commercial aircraft aloft every hour of every day over the United States of America, right? So, do you want to take cruise missile defense with lots of tracks, our current commercial air tracks, plus now potential threats, right, and push that into C2 BMC?

I'm not sure you do. I think that's a discrete decision point, because now you take a very pristine C2 picture for ballistic missile defense, and in the future, hypersonic missile defense makes perfect sense to keep those two together. Cruise missile defense, you may want to have command and control approach that a little differently. And you're also going to be using very different sensors for cruise missile defense, like over-the-horizon radars. Maybe you'll tap into our current radars around airports and whatnot, but you've got to get your

sensor net out there. We're going to have to have over-the-horizon radars, and we're going to have to do what we can from space.

Space surveillance is going to be pretty tricky. Seventy percent, 60 to 70 percent of the globe has clouds over it every day. That's a lot of cloud cover. One, that can shield cruise missiles flowing at lower altitudes. And then for the hypersonic and the ballistic missiles, we have to get cloud break. And then once we have cloud break, we have, when we're looking down at the earth, we have clouds in the field of view. We have solar clutter, which is glinting coming off the clouds into our sensors. So, we have to have a network of sensors to be able to work around that.

So, the command and control, the Navy has a great cruise missile defense command and control system, and we have an excellent ballistic missile defense capability, right? And we feed into C2BMC. Hypersonic is coming in terms of a national capability. The Navy has a terminal capability, now extending it to the glide phase with the glide phase interceptor out of the Missile Defense Agency.

But do remember, the reason that the Navy has been focused on this is for centuries, the answer was, well, our ships need guns, more guns and bigger guns. Centuries, we had centuries of that across the globe. And the epitome, you know, the pinnacle of that was World War II with the battleships and these massive guns. And then the kamikazes came, which are cruise missiles with a human fire control. And all of a sudden, we woke up one day and said, more guns is not going to cut this. Hundreds and thousands of rounds to take down one kamikaze. We were not going to live, we're not going to be able to live in that world. And again, once you add computers, then you have smart missiles, much harder to defend against. So having an air defense capability is essential to being able to establish sea control and project power.

You have no option in the Navy. And it's a 360-degree problem, because while aircraft like this, think Soviet Union, the Soviet bear versus the American Eagle and the struggle for survival during the Cold War. Aircraft, you know, bears and backfire bombers with loaded with anti-ship cruise missiles coming from one direction, Soviet surface ships in another direction, and their submarines could pop up anywhere.

That's why Aegis came. That's the reason Aegis was developed, was we could not meet that submarine launch supersonic sea skimmer threat without a higher level of automation. Having people working the surveillance radar and then having people working the loading the missiles onto the rails, and then having a fire control, it just was not going to work. The timeline was too long to get after this existential threat of supersonic sea skimming missiles. So, this was a must do for the Navy.

Conversely, for the Army and the Air Force, they always had a front. And so their systems would be designed and architected, knowing that there was a front to the war. Well, since Ukraine and Russia have been fighting, that's blown up. There's no longer a front. Hypersonic weapons also take out the front. Advanced cruise missiles take out the front. The other services in the Joint Force can no longer rely on the fact that there's an established front, and we're trying to push forward and take over territory or in that kind of fight, traditional fold a gap, cold war kind of thinking.

That is gone. Absolutely. And so the thinking has to change with that as well.

Anyway, back to Golden Dome and what the Navy is going to do. The Navy is certainly going to provide surveillance and queuing to C2BMC to support the Golden Dome. We can be specially tasked when we're operating overseas, really without any interference to our daily routine.

And then finally, if when asked to, we can also support space domain awareness, which will become a very important characteristic of the future fight.

[Mr. Riki Ellison]
Hey, Tom, just one, if you can simplify this real quick. What happened with Guam? Why is this so difficult? If you have the Aegis system, why couldn't we just do it on Guam?

[Rear Admiral (Retired) Tom Druggan]
We could have. We could have an operational Aegis Ashore site on Guam. There were decisions made at a higher level and above, above the Missile Defense Agency on the approach for the Guam defense system and how to architect it. And instead of, and for good reason, right?

From one perspective is, well, if we have one Aegis Ashore site, like we have in Romania and Poland, well, then that makes it one big target. So, we need to disaggregate it and we need to have radars separated from launchers, separated from the C2 command and control, right? So that was the thought process. It was a survivability approach. And so it's a legitimate approach. It's a lot slower than had we ordered a known, good working system and just ordered it. It was just, it was simply putting it in a procurement. You could have even extended existing contracts, very straightforward.

[Mr. Riki Ellison]
We're working some sort of bridge right now, but hopefully Golden Dome is going to solve that as well. But thanks.

[Rear Admiral (Retired) Tom Druggan]
So, the bridge is interesting to me. When we did THAAD and Patriot integration, we integrated those two systems together. Remember this isn't, we're not, we're not just connecting networks, right? This is a control system and a really important subset of that is weapon control systems, right? So, you have to have the quality of data and you have to have low latency, which means very timely information.

You know, when we're talking about hypersonic threats or ballistic missile threats, these things are moving miles per second. If you're off by even part of a second, you miss and we lose and that's not acceptable. So extreme, some people would say exquisite engineering. I reject that. This is just straightforward, robust engineering to make sure your end-to-end capability is real and exist, right?

And so in Guam, we could have had an Aegis Ashore established already. There would probably be a good reason for the National Guard to man it. The Navy could have manned it. Unlike Aegis Ashore Romania and Poland, you don't need a new base. The base is already

there. You don't need new housing. The housing is already there. And the Navy has assets there that we're really kind of defending ourselves between Apra Harbor with ships and submarines and, you know, our forward deployed munitions and things like that, as well as helping out the joint force with Anderson Air Force Base that's there. So anyway, that's it. I don't know if I answered your question.

[Mr. Riki Ellison]
Yeah, good. Good. It's good. Mark's going to clean it up here. So I'm looking forward to that. Thanks, Tom. Well done.

Ladies and gentlemen, Mark Montgomery, an expert, expert on this, been through some of the fights in Congress on this, and certainly as the three at the INDOPACOM clearly understands the Aegis capability going forward.

[Rear Admiral (Retired) Tom Druggan]
Thanks, Riki.

[Rear Admiral (Retired) Mark Montgomery]
Thanks. Okay. So I got to deal with Guam first, just because we had it last there. Look, the reason we didn't have an Aegis Ashore in Guam is the Navy didn't want it. I mean, first and foremost, I mean, to the Army's credit, they ran to the problem, to the Navy's discredit, they ran from the problem. And then once the Navy started to move away, the Army was able to bring their idea of dispersal of assets. I will say, after you've dispersed everything, I see one command-and-control node, and I'll just hit it, and all your dispersal is kind of irrelevant. So —and I'm not questioning Tom on that, I'm questioning the Army and JIAMDO on that—I thought it was a big mistake. And I'm disappointed in the Navy.

I honestly think 60 to 80 sailors stationed in Guam is not a hard left, as Tom said, all the things are there. More importantly, sailors like Guam. I get that Poland and Romania are remote TDYs. Guam would have been a PCS and so much easier. So I think we really could have gotten there much easier, much cheaper, and we would have a good, a system upon which we can build and build it out and get more launchers and VLS. And so we'll see what happens. All right.

But we're here to talk about Golden Dome and the Navy's role. And I think it's very important that we, you know, we're going to have a challenge here, which is the President wants something now, now, now. Let me tell you what's not present now, now, now, the actual threat. Golden Dome is about a threat that will evidence itself in a few years, when a large number of Russian or Chinese cruise missiles or, you know, air-launched conventional ballistic missiles, or air-launched hypersonic missiles can begin to reach the United States. We're not really there yet. You know, we are there in Guam. We are there inside the first island chain, inside the second island chain. Even Hawaii is not quite at the, you know, overwhelming number coming at it.

Now, when you have no defenses, one is an overwhelming number, right? You know, so we have to be ready for this. But I am deathly afraid that the existing defense industrial base is going to be, you know, banging at the door saying: buy more of my Patriot, buy more of my THAAD, buy more of my 1990s and 2000s technology to slap down around your major cities

to protect you against this threat that has not yet evidenced itself. And honestly, the amount of defended area you get from these systems is limited.

And each system is optimized for either an IRBM or ICBM in the case of GBI, or a MRBM, or a cruise missile, and they don't do well in the other, or are non-existent. So you'll have to put multiple types of systems around each of the counter value targets that you want to protect, say New York City, LA, you know, major cities like that. And I'm afraid the president will see that as an admirable goal, putting these systems up before need and not be aware of the degree to which that will eat away all the money in the Golden Dome initiative, and not fund what we really need.

The president's going to have to do something that he's not known for, which is thinking about someone else, which is the president two and three terms from now, and making sure that person has an effective homeland defense system against the threats that will certainly be evident then, the non-nuclear threats against our homeland. And in fairness to the president, every president suffers from this take-care-of-it-during-my-term kind of mentality. He's pretty obvious. He's slightly more obvious about it. So why does this matter? This matters because the proper cost-effective way to get at the long-term threat to the United States are space-based systems.

And I get that space-based systems didn't work 40 years ago and 20 years ago. There have been changes both in not just the cost of launch, which is pretty well understood to be a 90-plus percent reduction, but in the technology that's developed around the ability to detect, rapidly detect, share information, determine a proper counterparty solution, and most importantly, some of the effectors involved in stopping this, in stopping event, whether it is, as Tom said, in the boost phase or in the ascent phase, or whether it's in the mid-course phase. And there's certainly advantages to one over the other. Okay.

So that said, to get at that long-term space—and look, we just picked the perfect person to deduce a space-based ballistic missile defense solution in General Mike Guetlein. I mean, his MDA is Tom, and his space is salty. He's everything put together in one package. And he even, I think, did a defense fellowship at SpaceX just to put some icing on the cake, right? So this is the perfect person to kind of lead this. What we need is for him to have the runway, to look at what the long-term solution is, and get it in place, and not be forced into a series of expensive short-term solutions.

Now, this is how the Navy comes in. We're not—that long-term solution is not Navy. It doesn't mean the Navy is not involved because our sensors will input into the command-and-control network that he developed for this, our shooters may get involved in forward defense elements. As you said, forward defense is alluded to in the Golden Dome Executive Order, so it needs to be integrated into this. But this is going to be an inherently space-based, Space Force and Space Command and Northern Command mission set. And that isn't the Navy normally.

Now, if you get involved in what can we do right now, now, now, now you start to get exactly what Tom said: drag ships off the coast for an extremely limited defense of that defended area. And we see this in Israel as we use SM-3s and sometimes SM-6s against inbound MRBM threats. There's limitations.

If we were to build Aegis Ashore, and believe me, Aegis Ashore is not transportable or mobile or anything else other than, where we stick you is where you eventually rust into the earth 30 to 40 years from now. So to me, if there's a heavy Navy role in this, it means we failed in the big picture of driving us towards the long-term solution. I get there's going to be some short-term solutions in there. I get the Navy's going to be like, didn't we do this crap off of Guam for 10 years? What do you mean, I got to park a ship off of here? And Tom's right. We did it for Noble Eagle. And we burned the Navy's readiness up in Noble Eagle—that's after 9-11—for years. And we'll probably end up doing it again a little bit in this. But the less we do of that, the better off the overall Golden Dome program is going to be.

And I also say that anything you invest in Golden Dome, the extra money, the reconciliation money to buy something, whether it's an Aegis Ashore or a THAAD battery or Patriot battery, I got some bad news for the service the next year. We didn't buy you any lifecycle maintenance. That gift is on you. And so whatever that free battery you just got or free Aegis Ashore, the next year, the cost of operating that, that 10% for every year, the cost to operate that just came out of your budget. And by the way, the base budget's in pretty sorry shape in FY26. And I think FY27, the base budget's going to start off in sorry shape as well unless we have another reconciliation. All right. So, Riki, what that tells me is the Navy may have, the larger the Navy role, the more Mike Guetlein didn't get his way. And so I'm really hoping we can get it right.

I do want to mention one other thing for the questions. I know there's only six minutes left here. I do want to give the Navy a ton of credit in missile defense. And it's going to make, you know, you did a, your SHIELD team did a great capstone on the importance of modeling and simulation to the success of the Golden Dome. And if you want proof positive of that, take a look at what Dahlgren and the Navy have done to improve our missile defense, our naval, the performance of our naval air missile defense systems in the Red Sea.

When Tom and I were ship COs, the Aegis tapes got updated yearly. When we were admirals, they got updated quarterly. They're now being updated, you know, weekly or even faster on occasion. It's allowing the doctrine to be reviewed more quickly and our systems to perform more effectively against an adapting adversary threat. I got to give a lot of credit to the Navy for their investment in Dahlgren and to Lockheed and the others that support that effort. And then acknowledge that that same sort of thing better exist for Golden Dome. As Mike Guetlein, you know, builds out the system, he needs to make sure that that investment in modeling simulation is falling right behind it.

And so there's where the Navy can help, is in modeling and demonstrating that value. So I know, Riki, I've taken the lower, the low impact view of the Navy and Golden Dome, but that's how I see it.

[Mr. Riki Ellison]
Okay. I think you're all three speaking that way. If you're Mike Guetlein, let's talk about his team. Should there be a Navy person on his top 10 team underneath him? Because as you said, if we go down that route, there's not anybody in there at this point. What's your advice on that?

[Rear Admiral (Retired) Mark Montgomery]

Well, Riki, this is a joint program. So when you get to one, two and three stars, you should be able to move around between them. So whether there's a Navy—I don't think there'll be a Navy guy that evidences himself. I think the Navy has done a poor job having enough flag officers in, you know, in the acquisition, Aegis acquisition effort to man anything other than the minimum jobs the Navy has to man at MDA and in the Navy. But it would, so there, but I could certainly think of a retired Navy one star or other who I might pull into the system to work for General Guetlein.

[Mr. Riki Ellison]
And what capacity? What capacity would the Navy go with?

[Rear Admiral (Retired) Mark Montgomery]
The capacity Guetlein, look, I'm not going to sit here and do his order chart for him, but I would bring in someone for the, you know, where's the Navy got skill in developing the sensor shooter architecture? I would say gently that if the Navy has kicked a little ass over the Army and how you do it, it's how we, how we created the every sensor, every shooter architecture through CEC, Aegis, weapon systems, our aircraft.

We did a pretty good job at that 35 years ago to the chagrin of the other services who ignored it, you know, both the Air Force and Army. So, you know, from my point of view, we have general retired general officers with that vision. And that might be someone good to come in or active duty officers. But, you know, I would just say the Navy shouldn't be, you know, clawing itself to death for that billet. If it's the right person, put them in there or put her in there.

[Rear Admiral (Retired) Tom Druggan]
So Golden Dome could definitely benefit from having Navy fire control people involved. That's at a technical level, right? There would be good value in that because everything we do in Aegis and everything we do at the multi-ship level, you know, strike group level, it's 24-7, 365. And our engineering has a weather eye and robust effort on fire control to make sure it's effective end to end. Now here, we're going to have a bunch of systems come together, right? Existing systems, and we're going to add some new ones.

You have to have that end to end perspective for space-based interceptors. You can't haveif we have somebody worried about surveillance and somebody just worried about the weapon and somebody worried just about C2 and nobody's worrying about the time it takes to go end to end, we lose. We have to have that system engineering approach for the space-based interceptor and also for cruise missile defense, but especially on that side of the house, right? On space-based interceptors. And then, you know, as we bring together different systems and end to end view of the performance is critical and the system engineering that goes with it. We're good at that. Navy's good at that, fire control.

[Mr. Riki Ellison]
And Mark mentioned that the mod and sim is ridiculous. I mean, what you're doing better than anybody to turn that threat to be able to, you know, I guess Ukraine and Israel would be that, but that would also seem you have to do a lot of mod and sim to reduce costs for this Golden Dome.

[Rear Admiral (Retired) Tom Druggan]
Well, to reduce costs is one thing. How about assuring performance? That's the other side of that. That's what we need the modeling and sim for, not to reduce costs. The cost is going to be at the end of the day, the cost is going to be the cost, right? So, it's important to keep that down. The way you keep that down is you push things from once you have something you want, you push it into production and you buy larger numbers of it, right? That's one way to do it. It's also doing modularity, doing modularity in your design upfront and thinking about the whole lifecycle and the sustainment piece, not just the capability upfront.

But what we need is performance. So, modeling and sim helps us with performance. And it's really important, I talked about the bridge, you know, when we did that in Patriot, we engineered those because it's fire control, right, together, you know, end to end with two existing systems, got a new capability out of it, right? Now we have IBCS and Aegis in the defense Guam defense system, and now we put a third party in the middle of it. It doesn't make sense to me. Just integrate the two together, right? The third party doesn't have any skin in the performance game, right? The IBCS and the Aegis side, they have skin in the game. Just let them work together. And the bridge is just another, it slows things down. It's inefficient.

[Mr. Riki Ellison]
I think Mike's going to handle that, Tom. I think Mike's going to figure what that big bridge for all of it is. I was just asking if maybe so far ahead of sim and mod from any other service because of the Red Sea and how they've been able to move that information quickly to adapt fast and using that. But we only got a couple of minutes. Is there any questions you want to push out? Is there anything that you want to ask?

[Mr. J.D. Gainey]
From the questions that came in, we've either addressed it or they're not relevant to this discussion. So we can go ahead and do closing remarks right now if you want to. I'll go first if you want.

[Mr. Riki Ellison]
Thank you. Go ahead.

[Mr. J.D. Gainey]
No, yes. I'll just use Admiral Montgomery's words, I'm going to pick up where we just left off. Just modeling the sim, having access to all the different sensors to rehearse to reduce the lag between observed thread to capability to beat that, there's a little bit of truth to sci-fi out there, right? So if we're not thinking about Golden Dome having a Ender's Game-like mod, sim, realistic, faster than real-time, co-analysis, evaluation piece to it, then we're probably not thinking about the problem set the way we should. We're talking about an umbrella that's bringing in all kinds of capabilities, not just service stovepipe. I know that sounds a little bit like JADC2. I don't want to talk about that abused word, but that's what we're looking at. I'll just say that the Navy has excelled when it comes to focus mission and capability alignment to that mission. Being able to scale it to support homeland defense is applicable.

My caution is if you have a going in assumption that Golden Dome will rely on Navy's forward posture, forward presence, and the kill chain architecture in place without augmenting that and paying for that to be part of the large architecture, then you're failing. You're just assuming that the Navy is going to be there. I know this. MDA has done it multiple times. Other planning constructs have made this assumption that the Navy's going ahead and just pick up this loose piece with not really having intention and rigor behind how it actually evolves into it. If you're going to do that, you got to pay for it as well and for a programmatic piece of it. Other than that, those are my final shots.

[Mr. Riki Ellison]
Thank you, JD. Tom?

[Rear Admiral (Retired) Tom Druggan]
We have capability and capacity. Right now, Navy has good capacity. We have over 80 ships, around 40, over 40 are BMD. The note of caution here is out of those 40 BMD ships, half are flight ones and flight twos that are coming up on their decommissioning date in the next 10 years, next 15 years. We're seeing cruisers being decommissioned now, but in five, eight years, we're going to start seeing BMD DDGs decommissioned.

So our BMD capability will level out and maybe even come down as that time approaches. That becomes a really big decision point on decommissioning an Aegis BMD destroyer or doing something else with it, maybe extending its life, maybe put it in the reserves, maybe do some other stuff. But the reality is, and the fair reason for the Navy to be concerned about some of the homeland defense commitment, persistent commitment, is that our force structure and our Aegis BMD fleet is going to decrease.

[Mr. Riki Ellison]
Thanks, Tom. Mark?

[Rear Admiral (Retired) Mark Montgomery]
Listen, Golden Dome has a great opportunity. I've said it multiple times, it needs to be space-based. The Navy has a role, but the role is framed by that and the fact that we have great tools, great sensor shooter, good data transfer, good modeling and so on. There are elements where we can be subject matter experts. I think in the end, there's a reason that General Guetlein was from Space Force was selected. And let's hope that we really reach that. So Riki, thanks a lot for having me here today.

[Mr. Riki Ellison]
Yeah. Thanks, Mark. Hey, I think this was a great discussion because you clarified why Navy is not involved, and they don't need to be up front like the Space Force or the Army or the Air Force. So that was a great perspective. And if everything goes to hell, yes, they'll be there on top of it. But certainly the requirement of Navy skill sets over the last 30, 40 years need to be part of the build on Golden Dome. That expertise, whether you go MODSIM, C2, the whole thing, they still got to be, I believe, an integral part on Mike Guetlein's team. But a great education for all of us to understand the Navy's role with Golden Dome, and I think it's, there's no argument.

I think everybody's in agreement that they're going in the right way, in the right direction until Mike decides what he wants from the Navy, as he decides on every service, to pull that in and he has the authorities to do that. So I think we're in a great position. Thank you all for being very informative on the Navy deep dive on missile defense. Thank you. Thank you from Germany. Thank you.