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Admiral Richardson: Thank you very much for that introduction. Thanks also to Saab North America for sponsoring this event. Fred, I appreciate the introduction and congratulations on everything that the Atlantic Council has done and continues to do. I intend to talk and cover each of those five major issues here in my ten minutes of remarks. [Laughter].

With respect to working amongst four stars, I’m very comfortable with that. In fact, my wife has made it very clear that no matter how many stars I get she’s that plus-one and so I’ve gotten very comfortable with working amongst five stars. [Laughter].

I’ll tell you what, you touched on it, this idea of great power competition. I’ll just get through some remarks very quickly because I have always found that the richest part of these events is really getting into the discussion, and particularly the audience discussion.

I’ll tell you, to address this, it was mentioned in the Design for Maintaining Maritime Superiority Version 1, where we identified that we were indeed entering a great power competition. Then, the National Defense Strategy, in the early part of ’18 made that our defense strategy in response to the security strategy, and we then got to work and made sure that our naval strategic thinking was fully aligned. That resulted in a couple of documents, guidance if you will, coming out at the end of 2018, one of which was Version 2 of the Design for Maintaining Maritime Superiority. It was named Version 1 on purpose, because we knew that in this dynamic environment we were going to have to refresh this, come back and check our assumptions, make sure that we were keeping up with the pace of change.

When we think about great power competition, we are tempted to harken back to the last time that we were in such a competition, and you alluded to it, kind of the founding of the world order that we participate in today. And so while certainly the players, some are the same and some are different. Much is different. But certainly the rules of this competition and the way that it’s conducted have changed a great deal.
This is where we’ve tried to focus our attention, not only on the participants in this competition but also how this competition is unfolding.

If you want to consider some of the changes, even in this I would call traditional an environment as the maritime, if you want to talk about a traditional dimension of maritime activity, the amount of just maritime traffic, shipping traffic on the ocean has quadrupled in the last 25 years since the end of the Cold War, and it’s fueled growth in the global economy. Global GDP roughly doubling in that same period of time.

That’s a remarkable fact if you think about. We’ve been going to sea, people have been going to sea for 10,000 years easily, and to see a four-times increase in the last quarter century is really almost disruptive.

So you see this contesting pressure on the sea as the traffic increases.

But there’s so much more. The information age is on us and 99 percent of that information travels on undersea cables. So there’s this maritime infrastructure that is a big part of our dynamic change.

Then you mentioned the role of technology in general coming into the environment so much faster. Also being adopted much faster than it has ever been before.

If you think about the telephone. Alexander Graham Bell launched his telephone. It took about 35 years for a significant part of the U.S. population to get a phone. Apple launches its iPhone and the same population gets it in about three years. Three to four years. That phone, of course, brought a lot more to the table than the phone.

So this dynamic way that the competition is being conducted I think requires a sense of agility that we just didn’t have before. We’ll use a football analogy since we’re still basking in the victory of the Patriots in the Super Bowl. The idea that we could have position by position the most dominant defense in the league, but if we don’t keep pace with the no-huddle offense we’re just going to be falling further and further behind with each play. We’ll be dominant and irrelevant and that’s not what we need to be doing.
So as we think about where we’ve been the last 15 years or so, we got very good at sending naval force elements to the Gulf, fighting in CV OA4 up in the northern Gulf in the war on terror, and then coming back. We optimized that system to get the most presence there for the least cost. That leaned out an awful lot of your Navy and optimized it for that mission. You’ve got to always watch that optimized word, right? Because you’re optimizing against a set of criteria and you’ve got to watch those criteria.

Our criteria have changed now. So we need to be optimizing toward flexible options. We need to be optimizing toward restoring global maneuver in ways that are much less predictable against these strategic competitors.

The response to that of the U.S. Navy in terms of the big muscle movements of our operational goals, one is that we do have to restore a sense of agility. I would say that we have to restore a sense of conceptual agility in terms of how we think about operating the force. This isn’t so much a material challenge as it is just a challenge of the imagination, so we have to think a little bit more creatively in terms of how we get after this competition, particularly in the lower ends of the spectrum of competition, if you will. A gray war, gray zone conflict, competition below the level of conflict. However, you want to describe it, we need to be more imaginative in terms of how we do that.

So we’re maturing new operating concepts like distributed maritime operations. We stood up, coincident with the standing up of 2nd Fleet and the Joint Forces Command in Norfolk, Virginia, we stood up a development group on the East Coast to try and help us get to these more creative concepts.

So that’s conceptual agility.

We also need to restore geographic stability. So if it wasn’t water and it was land, you could just see these ruts in the oceans that we plowed through going over and over, back and forth to the Gulf. Both from San Diego and Norfolk to the Gulf and back. We need to be moving force elements around the world more dynamically, as I said.

So as I mentioned, we stood up 2nd Fleet to make sure that we could do that more creatively and effectively in the Atlantic. And we’re embracing this idea of dynamic force employment. I’m happy to talk about that more in the Q&A. But it’s a naval
concept. Naval forces are by their design maneuver forces and we do best when we move around the world.

The final dimension of agility we have to recapture is, I would say technological agility. We simply have to be able to field technology faster than we are doing it right now. I think this is a strategic undertaking that we have. We have a number of great ideas that are on the cusp. Some of these technologies are going to be absolutely decisive in terms of defining who wins and who does not in these conflicts and in this new era, this digital era, this information era, first to the market is decisive and it doesn’t have to be first by much. But even a month or two can mean the difference between winning and losing. We simply have to get better at that.

This is just us. This has nothing much to do with the adversary, except that they’re moving faster than we’re moving right now.

So in addition to agility with those three dimensions, the second response is that we have to be thinking long term. This is going to be a long-term competition, and so we have to be thinking in terms of sustainable types of solutions. We can’t be running at the red line all the time or we’re simply going to become too fragile.

Finally, with respect to capability and that spectrum of competition, we really have to make sure that we own the high end of that spectrum. We’ve got to be decisive on that end of the spectrum so that as crises emerge we will have the ability to de-escalate those crises and return to a lower energy competition, and we have to do that on our terms. The terms of us and our allies. So we have to be thinking more sustainably.

So in many ways, as I look here at the distinguished Board members and the panel members of the Atlantic Council, you’ve got to be thinking this is a lot of back to the future. When I talk to the retired four stars, they say what are you talking about? I thought we were doing this all along. The truth is, it is a bit back to the future, but under a new rule set.

So this is the way we’re moving out. I think I’ll leave it at that and we can explore the details of each of those dimensions through the Q&A rather than me trying to guess what’s on your mind. You can just ask me the question that’s on your mind directly. Thank you all very much.
Moderator: Thanks, CNO. You certainly gave us a lot to think about. What I want to do, actually, is cut a little bit back on my time so the folks in the audience can throw you the really nasty questions.

By the way, you said something very controversial. You sort of implied that it was a wonderful thing that the Patriots won. [Laughter].

Admiral Richardson: [Laughter].

Moderator: I’ll leave it at that. It might cost you some budget money.

Admiral Richardson: I have deep Atlantic roots in New England.

Moderator: You talked about back to the future, and one of the things when I came into this business more than 40 years ago, everybody talked about carrier vulnerability. Here we are back again, a lot of people are talking about carrier vulnerability. Can you talk a little bit about how you address that?

Admiral Richardson: What do I think about carrier vulnerability? It is a question that is for very, very good reasons on our mind. And just as you said, it should be something that is always on our minds because it’s such a, it’s a tremendous force element for the Navy, for the nation, and in many ways all of our warships, our sovereign U.S. territory, but when you put a carrier and a strike group out there, that’s a tremendous expression of U.S. national power.

As technology continues to advance, there is this kind of back and forth.

I would say the big thing that is occupying our minds right now is the advent of long-range precision weapons. Whether those are land-based, anti-ship ballistic missiles; coast defense cruise missiles; you name it. Those weapons connected with -- it’s a reconnaissance strike network that’s becoming more and more capable.

But the other thing is, this has been the dynamic since at least [inaudible] corps, the kind of reach and precision dynamic, and there’s two sides to it. There’s an offensive part and there’s a defensive part. So the advent of some of these technologies, particularly directed energy types of technologies, coupled with
the emerging power generation systems on carriers is going to make them a much, much more difficult target to hit.

I would say that rather than expressing the carrier as uniquely vulnerable, I would say that another way to express this would be that it is the most survivable airfield within the field of fire. This is an airfield that can move 720 miles a day. That has tremendous self-defense capabilities. And if you think about the sequence of events that has to emerge to be able to target and hit something that can move that much. And each step of that chain of events can be disrupted from the sensing part all the way back to the homing part. It’s the most survivable airfield in the area.

The second is to your point, I would say that in many ways the carrier is less vulnerable now than it has been any time since before World War II. World War II we were putting aircraft carriers in action, and we saw that they were in combat, taking hits. So there was all the vulnerability that came with that.

I will tell you, during the Cold War the Soviet Union had a tremendous amount of Navy at sea, especially undersea Navy, and there was a vulnerability associated with that.

So you lay all of these trends together and then the capability of the ship. The emerging capability of the air wing, the carrier’s going to be a viable force element for the foreseeable future.

**Moderator:** Talking about carriers, I remember a whole bunch of us, at least those of us who have gray hair or no hair remember, President Reagan basically got the Navy going to 15 carriers and 600 ships. You’re nowhere near that. Your answer to that, I think, is dynamic force employment, and you kind of set me up with your remarks to ask you this question. Maybe you want to expand on that.

**Admiral Richardson:** Sure. We’re at about 287 ships and climbing. Our analysis, for now the number is 355. We’re in the middle of reassessing that force structure. We’ll see where that takes us. That study is due to complete later on this year. The 355 includes a demand for 12 carriers, so that’s where we’re marching to right now.

Then it’s the matter of how we employ that force. This is an area where we’re a bit, in terms of back to the future in many ways. So instead of just going to the Middle East and back, for
instance we took the Harry S. Truman strike group and moved it up into the North Atlantic and north of the Arctic Circle for the first time since 1991. Boy, I’ll tell you, we were knocking off a lot of rust in terms of how to operate at high-end carrier operations up that far north.

One thing that’s not changed, you know this, it’s still pretty dang cold up there. We had to break out a lot of books in terms of how to operate that. Old books. So we were bringing things like baseball bats and everything else to knock off the ice. But we did it. Communications is not as robust up there as it is in the middle latitudes. But you’ve got to go up there and you’ve got to practice it.

The logistics support, to be able to support a strike group in these new areas of the world that we’re operating, all of that has to be laid in as we optimize toward a new dynamic, if you will, a new set of criteria.

**Moderator:** Talking about up north, can you tell us a little bit about how you’re thinking about the Arctic these days?

**Admiral Richardson:** Well, the Arctic is another dynamic in the maritime domain. So the Arctic Ice Cap in the north is as small as it’s ever been in our lifetime. It’s the smallest since we started to measure it with satellites. So what does that mean? Well, that means there are continental shelves that are now exposed that were not before with their attendant resources. There are sea lanes that are open for much more of the year than they were. That has a strategic significance for trade and defense as well.

So we want to make sure, the United States is an Arctic nation. We want to make sure that as this dynamic changes, that we continue to manage that emerging domain with other Arctic nations in a way that’s reciprocal, fair, peaceful, conflict-free and so we’re watching that very closely. We’re partnering closely with the Coast Guard on this, supporting them as they reconstitute their fleet of icebreakers.

Right now, we see them in sort of the mid near future. We’re on a good trajectory. We’re keeping a very close eye on it for the long term.

**Moderator:** China has tried to become and maybe is becoming an Arctic nation. I know you were just in China. Could you tell
us a little bit about your impressions? What did you take back from this latest trip? You’ve been there before, of course.

**Admiral Richardson:** The aims of our visit to China were one, we’ve got to make sure that we continue to have a conversation with China. We’ve got to be talking, continue to seek deeper understanding of each other’s thinking.

Our thinking is different; We have common interests in many areas. I would say a denuclearized Korean Peninsula is an area where we share a common interest. We have differences. Some big differences in terms of how we consider the South China Sea. Certainly we want to converge on those areas where we have common interests and do some good together. We’ve got to make sure that in those areas where we have differences, the nature of the dialogue has got to be to minimize risk as we work that out diplomatically, conflict-free, and to dial down the risk.

Then these conversations with our counterparts, also very useful that if something should happen unforeseen, a miscalculation or something, we can ring each other up and de-escalate before it escalates out of control.

So for all those reasons, we went and wanted to continue this dialogue.

The theme of our visit was, I would say in a word, consistency. And consistency in a number of areas.

One, our actions have to be consistent with our words. So with respect to the South China Sea, President Xi made a statement that he would not militarize those features of the South China Sea, and yet we see military systems emerging on a very sophisticated military system. We made it clear that this inconsistency and the militarization of those islands is a destabilizing factor for the world, really. Not just the region, but for the world.

We need to make sure that the United States has consistently been present in the South China Sea, and this goes to our economic prosperity and the role of the Navy in terms of protecting and enhancing our economic dimension of military power. So we’re not going to leave. We have too many national interests in that body of water. About a third of the world’s trade goes through that. So this idea of consistency was a theme.
With respect to Taiwan. Our approach to Taiwan has not changed. We’re going to remain consistently focused on that and would not look favorably on any kind of unilateral action on either side of the strait to disrupt that status quo. So we kept on hammering those themes while we were there.

Moderator: We’ve got a bunch of very senior diplomats in the room, Tom Pickering for example. One of the things you write about in Design 2.0 is a thing called naval diplomacy. In a way, you’ve been doing that for an awful long time, sometimes firing on people like the Barbary pirates, sometimes doing other things. How do you see naval diplomacy evolving? Clearly there was something behind your highlighting that particular document.

Admiral Richardson: The aim of including that in the document was to highlight, well, it was really to celebrate how lucky one is to be a Sailor.

When we think about the elements of national power, certainly we want the naval force to be the dominant military power in the maritime domain. So you talked about all of those five issues and they all come front and center in the maritime domain, and I couldn’t agree with you more. I think that in general we’re looking at 25-50 years easy of a maritime centric world. Right? Lots of responsibilities for maritime forces coming in the next 50 years.

Those responsibilities, as I said, not only the military dimension of national power, but the Navy has a tremendous history of enhancing the diplomatic element of naval power. So you mentioned Barbary pirates, I’ll get back to that. The major summits conducted on U.S. warships. Gun boat diplomacy. There’s something to that still.

When we visit foreign ports it is almost a given that the U.S. Ambassador to that country will host a reception on the ship because it’s sovereign U.S. territory. So there’s this rich diplomatic history, and I think that there’s a role for that going forward for Navy.

Then I mentioned the economic element of national power, and the Navy’s almost unique role in preserving sea lines of communication. Ninety percent of the world’s trade flows over the seas, and we need to make sure that those sea lines, access to those markets are protected for our prosperity. Then advocate for that rule set that was put in place by some of the founders of the Atlantic Council that provided that level
playing field, particularly in the last 70 years. Everybody’s benefited from that rule set, perhaps most especially China, which has grown tremendously with that international order. So we need to advocate for preserving that.

**Moderator:** I’m going to ask you one last question and leave a lot of time for the audience. We’ve got a pretty big and distinguished audience here, and I don’t want to hog it.

You talk about agile thinking. You’ve got a new development command. You’ve got a lot of resources in the Navy, the War College, Post-Graduate School. How do you see that all coming together in a different way?

**Admiral Richardson:** That’s a great question. A theme in Version 2 of the design is continuing this project we started in 2016 in particular to energize the Navy as a learning engine. We have got to learn faster than our adversaries. We are looking at every way that we can do that.

The Navy has a rich tradition in this. There’s a great book out called Learning War by Trent Hone, and it talks about the Navy as a learning organization from when we became a global nation, from the end of the 1800s, the book goes up through victory in World War II and how the Navy learned its way forward all through that period.

Hey, we’re in another competition that’s going to require us to learn faster than our adversaries, be more agile. You mentioned a couple of really important elements of that learning engine, our schools. We have the Naval Academy, the Naval War College in Newport, Naval Post Graduate School out in Monterey. These academies, if you will, are going to do the academic part of this learning. But hey, that’s got to extend out into the operational navy. So what we learn and conceive of in the War College has to extend to the war games. The war games have to go out into exercises. There’s got to be an experimental dimension to this. And stitching that all together, we needed a conductor of that orchestra, so we’re going to stand up a three-star position, a Director of Warfighting Improvement, N7 on my staff, to make sure that this all is a coherent approach to getting after this great power competition, the problems that face us.

**Moderator:** Actually you prompted another question. Sorry, folks, but let me have one more.
Wargames. My understanding is we’ve actually had some of our allies playing wargames.

Admiral Richardson: Yes.

Moderator: Can you talk a little bit about how the Navy is thinking about working with allies in this new environment? And I would add friends.

Admiral Richardson: We talk about wargames in a couple of different places. One is certainly the operational warfighting line of effort and the learning part. But we’ve got to be mindful that we just don’t fight alone anymore. There’s no such thing as just a naval fight. So our nearest partners are going to be our sister services. So the Joint Force is going to approach this and our wargaming approach has got to accommodate a joint approach. So if you don’t look to your left and right and see your sister services in the wargame, it’s probably time to stop and get them in the room.

Similarly, we’re going to expand out to other elements of national power. The interagency has got to be brought in.

Then you go out from there and you’re talking about allies and partners. And boy, there’s a whole spectrum in terms of the roles that those allies and partners can play. Some can go with us right to the very high end of maritime combat. Some are going to be doing other roles. But I think these information technologies really allow us to stitch that team together in the most optimal way possible right now. And we’re seeing that born out in a number of combined maritime forces. First in the kind of Central Command AOR, NAVCENT; but also I would say in NATO has a maritime force, including allies and partners. Lots of excitement about the Joint Forces Command in Norfolk and the role that they can play for NATO to enhance the alliance. The maritime dimension of that alliance. We have standing NATO Maritime groups that go around and do good work. So all of this coming together, I think, is an expression of how important it is for us to be able to do this work with our joint force and with our allies and partner.

Moderator: Thanks. Please, even if you’re famous like Tom Pickering, please identify yourself. Tom Pickering, the first question. And everybody else too. Please. Just so CNO knows who’s asking the question.
**Question:** Thank you, Doug very much, and thank you CNO. It’s a pleasure to be here. I’m a member of the Board.

I want to ask a question on China Naval diplomacy in the South China Sea.

Just a brief introduction. I’m a proud former junior naval officer. Secondly, I wouldn’t be here today if my great grandfather hadn’t survived a grounding in the South China Sea in 1866 as an ordinary Sailor on a barkentine bound for Canton.

My question is easy and hard. I asked a former very distinguished American Ambassador to China, I won’t identify him, but he’s a Mandarin speaker. What is the most important thing, Mr. Ambassador, we can do with China to deal with the issues in the South China Sea?

His answer surprised me, in some ways pleased me. He said ratify the Law of the Sea Treaty. Interesting.

You and your profession have always been on the team in that direction. We live now in an era of treatylessness where in fact multilateral things are dead on arrival. How can we both keep alive the notion that we’ll use that treaty whenever we can and move in the direction of ratification. A long-term difficult question, but certainly strategic and involves naval diplomacy.

**Admiral Richardson:** First, I’ve got to say that I agree with that answer 100 percent. I think in this dynamic maritime environment that I skimmed the surface in terms of managing emerging opportunities in the maritime, they are international waters, right? And we want to preserve that nature of international waters. We don’t want to divide up the world’s oceans into some kind of sovereign types of things.

The United Nations Convention on the Law of the Sea is a pretty good document in terms of striking the balance. Let’s just take the Arctic, for instance. How are we going to manage this emerging opportunity for resources and everything? UNCLOS gives us a tremendous template to manage those types of situations in a peaceful manner. So we all have to buy into that.

I think in the aggregate, our nation is well served by doing that, and certainly the world economy, the world is well served.
So I would advocate for ratifying that treaty. We behave pretty much in accordance with the rules of behavior that underpin that treaty already. And it would be good to be a signatory for that treaty. It just lends a little bit of authority to what we say.

Moderator: You mentioned NATO, so I think I ought to call on Ambassador Vershbow. Sandy?

Question: Sandy Vershbow with the Atlantic Council.

As part of the great power competition that’s back, the Russians are back big time in the Eastern Med and especially the Black Sea. And since the occupation of Crimea they’ve built up all kinds of capabilities on the occupied peninsula. What more can we and NATO do to reestablish a balance in the Black Sea? Do we need to push the envelope on the Mantra Convention? Should we set up a headquarters in one of the littoral states such as Romania? Right now the Russians are kind of asserting themselves, establishing dominance and we’re not pushing back.

Admiral Richardson: This gets right to that question about how you get conceptual agility in terms of what are our not only responses in pushing back, but how we push first in a couple of areas? And so I think it would be great if we could get Russians, some of these competitors to respond to our first move. So there’s an advantage every now and then to playing the white side of the board.

That could come under a number of different options, I think. Everything from the measure that you mentioned. We’ve been consistently present in the Black Sea, the United States Navy, and in fact we did two deployments up there just in the month of January alone. We’re working very closely, exercising with the navies in the Eastern Mediterranean, the Black Sea region. So staying engaged in there, staying present. Actions consistent with words I think is an important part of that.

One area where we’re doing some new things is with respect to missile defense. So we have Aegis Ashore in Romania. I think that capability makes a tremendous statement. So we continue to do that, but we’ve got to take our own side in this fight. We’ve got to give the other team something to respond to. And then certainly I think -- NATO, it seems to me, and I know I’m preaching to the experts here -- to provide sort of slow and steady pressure. Right? To sort of suffocate these options over the long term if we can get together and act with the full power of the alliance. So whatever leadership role we can
provide there, I think as an alliance we bring more to the table together than any kind of a bilateral approach.

**Moderator:** You don’t have to be an Ambassador to ask a question.

**Question:** Good morning. My name is Max Travilla, I’m a policy consultant here in Washington.

I was thinking about the expression you used of going back to the future. In the Caribbean, with the exception of maybe the 1960s, pretty much the U.S. Navy has pretty much a relaxed environment in the Caribbean. Now as the Russians are more active and eventually the Chinese will have more resources in the naval fleets, and they have more of a presence now in the Caribbean and it probably will expand. We’ll have now probably two fleets of foreign countries in the area.

What is the future assessment of that potential near reality? And how do you see our reassessing our superiority in the Caribbean? Thank you.

**Admiral Richardson:** I think we’ve got enough capacity to respond to whatever might arise in the Caribbean. We’ve got great insight into that region. So in terms of a force level response, I think we’re in pretty good shape there.

I would say that with respect to a national approach, the military’s probably not the first element of national power I would go to in terms of making sure that we stay effectively engaged in this hemisphere. Not only the Caribbean, but in South America as well. So what we see that’s well known is these are economic types of entrees that are being made in fact much more than any military.

So I would advocate for a balanced national approach. I think this is where Secretary Pompeo is certainly going to make sure that we don’t lose a march in the Western Hemisphere.

**Question:** Hi Admiral Richardson. I’m Steve Grundman, I’m a Fellow here at the Atlantic Council.

One of the items on your agenda of agilities was concepts. Concepts of operation. This feels to me like a topic which is gaining a lot of momentum. By my reading of, for example, the report of the National Defense Strategy Commission, this was its
most distinctive recommendation, is that we work harder at innovating concepts of operation.

My question is, could you help all of us understand, that idea seems a little obscure, almost arcane, except for those of you who have been practicing and evolving concepts of operation over the entire course of your careers.

What should we understand that means? Maybe by example of an innovative operating concept.

Admiral Richardson: The reason it’s a challenge is because we have a vacuum there. But I would say that there’s a lot that I think we can do in terms of first of all, just being a little bit more clear about adhering to this international [law] that we’ve got, right? A lot of the things that we are responding to are people taking liberties with that order.

For instance, one of the things that we made clear during the visit to China is that in terms of rules of behavior on the high seas, first of all we do have an operational construct that is designed to minimize the chance of miscalculation when two of our ships meet each other on the high seas. And since our presence there has been consistent in terms of force level and what we do, the Chinese Navy is growing, there’s going to be more opportunities where we meet. So these rules are going to be operative more and more.

We should approach each other all the way down to the tactical level, our front-line commanders, in ways that actually make it easy for us to adhere to these rules of behavior. So let’s not be obstructing one another, driving our ships in front of one another, throwing obstacles in front of the ship, right? Let’s just be biased toward making it easy.

Then these rules have to apply to all of the forces. It can’t just be the People’s Liberation Army Navy to which they apply, but it’s also got to be the Coast Guard and it’s also got to be the Maritime Militia and everybody’s got to abide by these. Be more insistent about those would be a good first start. Right? Then we could start to see a rule set emerging that might have to do with this automatic identification system. This system that ships carry around that talks to where they’re going, what they’re carrying, and it provides a lot of information.

You can see a regime where hey, if you’re not squawking on AIS that’s consistent with where you are and what you’re doing, then
there might be some, depending upon where you are, some reason to challenge. So putting some enforcement mechanisms in so it makes it harder to play fast and loose with the rules, I think. But you’ve got to make a move to enforce those things.

I think that a lot of that structure exists. It’s just we’ve got to be a little bit more muscular to enforce it.

**Question:** Hi. My name is [Oscar Krushaminski]. I work for a Ukrainian newspaper that publishes in English called the Kyiv Post. And I am a Patriots fan.

This is a follow-on question to something that Ambassador Vershbow broached which is about Russian actions in the Black and Azov Seas. You said that there have been two deployments in January by the U.S. Navy to signal certain things to the Russians, but it seems that the Russians desist for a while in their interceptions of merchant shipping when this happens, but then they go back to again intercepting. Sometimes for days holding merchant ships, and aim is to just strangle trade with the Ukrainian ports in the Azov Sea it seems.

I know it’s a diplomatic, tricky diplomatic question, but what else does the Navy envisage doing in maintaining maritime rights in that area?

**Admiral Richardson:** I think this is something that must be done with a clear intent. Right? So there should be the right to pass through the Kerch Strait into the Sea of Azov unharassed. Once we’ve defined that as our aim, then the international pressure, the regional pressure and sort of the robustness of the response there I think over time has got to be a response.

The U.S. Navy, by virtue of being consistently present there, we exercise with the Ukrainians every single year, you know, show that level of commitment. Then the regional response, I think certainly with U.S. participation if not leadership, is going to be as important as anything as we increase the pressure and the consequences of that type of action. But trying to do this bilaterally I think is not going to be as successful as a regional, multilateral approach that squeezes in an objective.

**Question:** Good morning, Admiral. I’m Doug McGuire. I work with [Synac] Cyber Security. We’re a partner of DoD, actually on the Hack the Pentagon programs. You talked about the need for agility with technology or to stay ahead of the no huddle offense of our adversaries, if you can explain a little bit
about how you’re looking at deploying new tools or how to use some of the innovations that are happening within DoD to supplement the cyber security teams at the Navy, I’d appreciate it.

Admiral Richardson: I think first and foremost you’ve got to organize for success. So in terms of the Navy’s information warfare effort, if you’re a traditionalist. This is where, again, things are in many ways the same but in many important ways different. Naval power has generally been defined in terms of our warfare communities combining together. Those warfare communities traditionally were undersea warfare, surface warfare, and air warfare. That’s how we all stitch it together. And each of those communities had a community leader, it had a warfare development center for concept development, it had a personnel management system on education and training and all of that to deliver naval power in that domain.

If you look now, there is a fourth pillar to the way that the Navy is organized, and the fourth pillar is information warfare. So we have an information warfare type commander down in Suffolk, Virginia. They’re responsible for the man, train and equip of information warfare professionals. We have the 10th Fleet up in Fort Meade, so that is right there next to NSA is our cyber fleet. And we’ve got teams that are deployed really globally in response to this emerging information warfare threat which is not only cyber but also space, also I would say electromagnetic, all of those things.

We have an information warfare commander in every strike group. So in addition to the air warfare commander, the undersea warfare commander, et cetera, an information warfare commander. And if you go to the strike group briefs these days, the information warfare commander starts the brief, talking first. How are we going to get after the electromagnetic part of this event? And they always talk last in terms of okay, how are we going to finish this thing up electronically?

Then throughout, how jamming deception, the cyber, all of that is going to play.

We talked about wargames a little bit earlier. We’re now getting to the point where we’ve got to start in a robust fashion wargaming these elements of conflict. Too often we white card the cyber part. Yeah, that’s going to go perfect, here’s your white card. And we know that it’s much more complicated than that so we’ve got to start thinking about
wargaming these so that we understand when we’re going to need the authorities to do the things that we need to do in this domain, how soon we have to get started on getting those authorities, building the tools that are going to be the effective part and decisive in that domain. So a lot of richness in terms of learning.

And then of course, it all has to come together with sort of nano-second timing. So getting that all fleshed out is going to be an important part of this learning engine and the wargaming part of that going forward.

**Question:** Hi. Hope Seck with Military.com.

I was interested in your remarks about rapid prototyping and wanting to get better at that. I would be interested in kind of your top couple of programs that you’d like to put on the fast track.

I also wanted to ask about one technology that was kind of much hailed a couple of years ago, and we were going to deploy this in 2015. Since it’s kind of slowed way down. That’s the electromagnetic rail gun. I’d be interested in your thoughts about where that effort is heading. I think there was a story just a couple of days ago about how maybe nowhere.

**Admiral Richardson:** Maybe nowhere. [Laughter]. All right, good.

Listen, in terms of the rapid prototyping, this is another area where in general we need to move faster to get capability out into the hands of sailors, soldiers, airmen and marines, right? And again, this is a self-inflicted wound. We just need to get better on this ourselves.

As I’ve studied this, I suppose, I would say that sure we could revise DoD 5000, the acquisition rules and all of that, but this is fundamentally in my mind a human resources problem. We need to find those people that are both smart and capable, motivated with a sense of urgency, that understand the stakes at play and are biased toward getting things done rather than biased toward not. Right, and slowing things down.

There is sort of a general bias, and there’s a lot of people in the community of travelers that you have to get going down the road. And almost any one of those can slow the process down.
So I think weaning the system out, finding those fewer but more motivated and capable people to move this thing forward is an important first step for us to take.

Now, we’ve created some sort of speed lanes, if you will, with, we’re not bypassing any rules, but we’ve got some folks that are biased toward action to try and bring unmanned out to the fleet as quick as possible in all three domains. We’ve got an unmanned tanker who was conceptualized in the ’17, ’18 timeframe. That thing’s going to be integrated into the air wing by 2024. So that’s a pretty fast march for an aircraft program.

We’re doing things with warships. So the new frigate program is going to be a start. This is something that we conceived of in ’18 and we’re going to let the contract for that in ’20. It’s going to be designed with innovation and rapid modernization in its DNA. So it will be able to modernize very fast and follow Moore’s Law, whatever current technology takes.

Unmanned surface, unmanned undersea. So unmanned technologies. We’ve got in terms of directed energy weapons we’ve talked about those a couple of different times. We’re moving a family of directed energy weapons forward, because it really takes kind of a family approach.

Similarly, with missiles. WE really need to regain range on our missile systems, so there’s a family of missiles that we’re trying to move as quickly as possible out to the fleet. Then produce those in decisive numbers.

There’s a number of other types of things, but those are three right off the bat that I think we’re trying to move.

Now you mentioned rail gun. I would say that rail gun is the case study that would say this is how innovation maybe shouldn’t happen. It’s been around I think for about 15 years, maybe 20. So rapid doesn’t come to mind when you’re talking about timeframes like that.

Now we’ve learned a lot, right? And the engineering of building something like that that can handle that much electromagnetic energy and not just explode is challenging. So we’re going to continue after this. We’re going to install this thing. We’re going to continue to develop it, test it. It’s too good a weapon system, so it’s going somewhere, Hope.
The other thing is, not uncommon in innovative types of approaches is there are these things like the Post-It note right? It wasn’t invented to be a Post-It note but that’s what we use it for now.

The projectile that we conceived to be used with that electromagnetic rail gun is actually a pretty neat thing in and of itself, so this high velocity projectile which is also usable in just about every gun we have. So it can be out into the fleet very, very quickly, independent of the rail guns.

So this effort is breeding all sorts of advances. We just need to get the clock sped up with regards to the rail gun.

Moderator: Admiral, we’ve overrun our time and that’s because you answered so thoroughly.

Admiral Richardson: Because I spoke too much.

Moderator: No, it’s not actually. You actually were pretty straightforward, which is cool.

The Navy, as you said, you’re the pointy end of the American national security spear right now, and will be for some time. I think and I hope you’ll all join me in thanking the CNO for what I think was a terrific presentation.

Admiral Richardson: Thank you.