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**DWG:** Welcome to a Defense Writers Group conversation. It's an honor to have you and we look forward to it. I should mention to folks on the call that in addition to Admiral Charles Richard, Commander of U.S. Strategic Command, we will also have Rear Admiral Ronald Fritzmeier, who is Director of the Nuclear Command, Control and Communications Enterprise Center.

I'm going to just ask my question to Admiral Richard to sort of get us going, to kind of lay out for us in particular the area of NC3 -- Nuclear Command, Control and Communications, and how does the Enterprise Center fit in. Tell us this aspect of your command, sir, and how does that fit?

**Admiral Richard:** Thanks for a chance to talk to the Defense Writers Group. I look forward to any chance that I have to talk about the most important mission in the Department of Defense.

What I really do want to concentrate on today is Nuclear Command and Control -- NC3. Which is often a piece that we don't talk enough about. It is as important to the strategic deterrence mission as the delivery systems and the weapons complex and we are in equal need to recapitalize it alongside the delivery systems.

To start, I think the Secretary of Defense got it right back in 2018 when he established the NC3 Enterprise Center that Admiral Fritzmeier leads, and I'd start with that is a separate organization from U.S. Strategic Command. I am responsible for both, but what the NECs does, it's in its name. It is the enterprise lead.

NC3 is a very complex system of systems. There are over 204 individual systems that make it up from a technical standpoint and consolidating increased responsibility for operations,

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requirements and systems engineering in the NEC was a very good move from the Department of Defense to ensure that we'll have this capability going in the future.

The other two pieces of course are acquisition and programming. Those are the responsibility of the Under Secretary of Defense for Acquisition and Sustainment, Ms. Lord, and we work very well together in working through NC3.

A couple of things to start off with real quick. I have complete confidence in the NC3 system that we have today and that includes cybersecurity. And I think it's important to note, many of y'all have heard me talk about before throughout this year, STRATCOM and our strategic forces remained fully mission capable throughout the COVID-19 pandemic. It was true when I said it, it's true today. I fully expect that to be true in the future.

One of the key reasons I can say that is because our NC3 system is as good as it is. Its ability to handle unexpected challenges, operate distributed, redundant, separated, was tested by the pandemic and was a key enabler for me to say that our forces and our ability not only to defend this nation but to provide extended deterrence and assurance commitments to our allies has continued throughout this particular challenge.

A couple of points. We're already transforming the NC3 system that we have. I have to be careful because I can't go into a lot of details on this, but we have several guide stars in terms of where we're going.

One is a Mission Need Statement so we know what we need NC3 to do going into the future. We have finished now our third Capabilities Programming Guidance which is unique to NC3 where the Secretary of Defense directs the services and agencies on investments necessary to get to the next generation. And we consolidated operations with operations order to uniformly put standards of performance and ability to execute all under one authority. We've defined increment one in broad terms. We'll get better in our space posture, better hardness to emerging cyber and crypto threat, and we'll have the ability to dynamically reconfigure our command and control.

So I'll go into a lot more detail. There's four lines of effort as we push forward in this. But that's a quick overview.

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The final thing I think I'd add here is, think of the NEC as the conductor of a big orchestra. She's not a program, she's not a service, she's not a combatant command, but she is the place that pulls all of the effort together of all the other players inside the department and NC3 and makes sure we're working in coordination with each other, we understand how it works from a system of systems standpoint, and we can put operational risk on par with programmatic and technical risk to make our best decisions.

With that, sir, I'm ready for questions.

**DWG:** There are bound to be a lot of them. This is a record sized turnout for the Defense Writers Group in the three years I've led it so I'm going to launch right into questions from others. I won't ask a follow-up but I'm sure people may want to cover things like whether you're finding foreign jammers and hackers actively trying to access the NC3, and if so how you're responding.

You're interested in moving towards dual-use mechanisms and whether or not that might increase the danger of a nuclear miscalculation.

What's going to happen when the Doomsday Plane is too old to fly?

There's a lot of interesting questions in addition to the NC3 aspect.

What I'm going to do is introduce people to ask questions and I'm roughly using the order in which they signed up for this session.

Aaron Mehta with Defense News. You were first on the list. Are you on and do you have a question?

**DWG:** Aaron's not on but this is Valerie Ensena with Defense News. I'm taking his place.

Admiral, I wanted to ask about New START since the deadline is coming up in a couple of weeks. Have you had any discussions yet with the Biden transition team on that? And what's your message been to them? And can you talk about whether you have any sort of preference on whether the treaty should be renewed for one year, for five years?

**Admiral Richard:** Valerie, nice to hear from you.

I'll start with one, I support any arms control agreement that enhances the security of this nation and reduces the threat to this nation and our allies. And in fact I did back that up with action that my Deputy Commander has been on the team that has been doing the negotiations for New START such that the best military advice is immediately available to that team and would extend that commitment to any future administration.

Beyond that, the whole goal is -- we can talk about New START. There's other ones that we could go talk about. As long as it reduces the threats, everybody complies, it's verifiable, I'm in favor of it.

I think the challenge in a lot of cases is, and New START's an example of this, it only handles a subset of the threat to this nation. So how we go about addressing the entire threat, and there's a couple of different approaches, right? Take care of the one you have, worry about the rest of the threat later, work to do the whole threat. Bottom line, that's a political decision and I will simply provide best military advice about the implications, whichever way you wish to go. But it is a reminder that Russia and others are threats to this nation including to our nuclear command and control which is something that I'd like to talk about here today. Over.

**DWG:** Lauren Williams of FCW, you're next on the list if you have a question.

**DWG:** Thank you for doing this, Admiral. My question is regarding the electromagnetic strategy and I'm interested in what STRATCOM is doing to get after the, like the synthesizing of EMF data and implementing it into operational planning.

**Admiral Richard:** You're correct that I have some responsibilities to the joint force for electromagnetic spectrum and so I am one of the lead advocates inside the department for putting together joint requirements and recognizing the need to improve our abilities inside electromagnetic operations and warfare. I have two subordinate centers that work very hard on that. So we are working down the lines to implement the new strategy that is coming out inside the Department of Defense. I applaud that effort. But that's actually not directly related to NC3. Over.

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**DWG:** Michael Gordon, Wall Street Journal.

**DWG:** Sir, here's my question. It's a modernization element in an NC3 element.

Given the cost of the nuclear modernization budget and defense budget trend, there is some interest on the part of the incoming administration in taking a closer look at nuclear modernization. And in that context, some people -- I'm not saying incoming officials but in the NTO community, have suggested a further life extension of Minuteman III as opposed to proceeding apace with the Ground-Based Strategic Deterrent.

My question is, from your perspective would it be advisable or feasible to extend yet again Minuteman III? And from a command and control perspective, what are the implications of that? Because presumably when you go for the Ground-Based Strategic Deterrent it also involves a whole panoply of other capabilities including in the command and control arena.

**Admiral Richard:** Sir, I applaud your subject matter expertise in this because you are quite correct. Both Minuteman III and Ground-Based Strategic Deterrent are weapon systems which includes the command and control that goes with those systems. And part of what gets modernized with GBSD is its command and control. In fact they are doing some pretty -- the Air Force is doing some pretty revolutionary things where they're headed with that. I applaud and endorse their efforts.

Let me be very clear, you cannot life extend Minuteman III. It is getting past the point of it's not cost-effective to life extend Minuteman III. You're quickly getting to the point you can't do it at all. And I don't understand, frankly, how someone in a think tank who actually doesn't have their hands on the missile, looking at the parts, the cables, all of the pieces inside that. That thing is so old -- I was. I was out at Hill Air Force Base looking at this. That thing is so old that in some cases the drawings don't exist anymore, or where we do have drawings they're like six generations behind the industry standard. There's not only anybody that's not working that can understand them, they're not alive anymore,

So when the Air Force comes and says that, I have great confidence in what they're saying, and it includes the NC3 piece.

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**DWG:** Could you just elaborate a little bit on the advantages the Ground-Based Strategic Deterrent gives you in the command and control arena and to what extent, why that's so significant, if it is?

**Admiral Richard:** One of the biggest pieces is in its cyber resilience. We will replace a 60 year old, basically a circuit switch system with a modern cyber defendable up to current standards command and control system. So just to pace the cyber threat alone, GBSD is a necessary step forward. But it is also far more flexible and resilient against any number of other threats that are presented.

Again, a lot of this is a combination of can you pace the threat? And remember, what's important that's different in the world today than it was say back in the Cold War, the last time we were in great power competition, this nation has never before had to face the prospect of two peer nuclear capable adversaries who have to be deterred differently, and actions done to deter one have an impact on the other. This is way more complicated than it used to be. This is an example of a capability we're going to have to have to address threats like that. Over.

**DWG:** Thank you. Eric Schmidt of the New York Times. Are you on?

Okay, Rebecca Kehl of The Hill.

**DWG:** Thanks for doing this, [Admiral]. My question was somewhat similar to the previous one so I'll just broaden it out a bit because I think there is an expectation that the incoming administration might redo the Nuclear Posture Review. So I guess I'll just ask generally, is there anything you would advise them as they look to review that?

**Admiral Richard:** One, I welcome an examination of the nation's strategy here. I recommend that based on the threat. The threat is moving so fast that even given the time since the last Nuclear Posture Review, warrants another look at it to make sure that we still endorse our strategy and we have sufficient capability to execute that strategy.

But more broadly, I think a Nuclear Posture Review is too narrowly defined. We face global threats, and to parse our

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examination of those into a Nuclear Posture Review, a Missile Defense Review, a Space Review, a Cyber Review kind of misses the totality of what the strategic threats to this nation and our allies are, and I would recommend a broader based Strategic Review as opposed to parsing it out in pieces.

**DWG:** And I guess is there anything specific you think needs to be reexamined within that broader strategic review that wasn't looked at in the previous Nuclear Posture Review or Missile Defense Review or anything like that?

**Admiral Richard:** One, updated threat to understand and how those competitors might use their capabilities in ways that are not in the United States' interest. That would be step one.

Validation, that we like the strategy that we have. And it's kind of important on the strategy discussion. Like I said before, this nation has had basically the same strategy dating back to the Kennedy administration. It's been repeatedly validated through multiple administrations. It would be useful to do that again. And then to be satisfied that the capabilities that we have are able to accomplish that.

This is an important point. There's no such thing as nuclear deterrence all by itself or deterrence in cyber or deterrence in space. Deterrence has to do with an opponent's decision-making, right? It's a fundamental equation for whatever aim the other guy or person desires. Can I either deny that or impose a cost greater than what they seek such that they choose restraint over action? And that can play out in any domain. It plays out worldwide. It plays out with nuclear capabilities, conventional capabilities, cyber capabilities, and you've got to look at it as a spectrum.

If that equation -- forgive me, I'm an engineer. If that equation fails at any point in its boundary conditions, then deterrence as a whole fails and I think it's an issue sometimes. We talk about pieces of deterrence but we don't look at it in its totality, but that's how it's executed in practice.

**DWG:** Abraham Mahshie, you're next if you have a question.

**Admiral Richard:** Thank you so much for doing this, and Admiral, thank you so much for the opportunity to address you.

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You spoke about getting your hands on those missiles, the wires, looking at how aged they are. Is this simply a matter of modernization in GBSB? Is this simply a matter of changing over to new systems, which in itself is enormous? Or are there new capabilities that will be added?

And along with that, you mentioned how deterrence is different for different adversaries. I wonder if you could be a little bit more specific. And thank you so much.

**Admiral Richard:** First, I've got to be really clear. They didn't let me touch it. I'm not trained, actually, to do that and they were very careful to make sure that I actually didn't touch anything. But to your point, what GBSB will do is add capabilities that enables it to pace the threat. The threat against this weapon system is not the one that we had 60 years ago when we designed the Minuteman III. So yes, she has improved capabilities to enable her to continue to deliver the effect that we ask that weapon system to go do.

And then the bottom line, I have answered the question you mentioned in great detail and I offer that only because we think very hard about how you deter different adversaries differently. But fundamentally it goes back to they have different decision-making processes. They have different goals and aspirations. Putin makes decisions differently than Xi and you have to take that into account when you provide the input to that that causes them to choose the benefit of restraint over the benefit of action. That's fundamentally where it starts, if that makes sense.

**DWG:** Jason Sherman, Inside Defense.

**DWG:** Thank you. Thanks, Admiral.

I have questions about three unrelated things in your portfolio. The Missile Defense Review; Trident II follow-on; and the Integrated Priority List cycle.

For the Missile Defense Review, there was a tasker for STRATCOM to conduct an assessment of command and control capabilities and ConOps needed to provide early warning and attack assessments for advanced threats including hypersonic weapons.

What's the status of that assessment? And the follow-on AOA

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that's supposed to come out of it?

**Admiral Richard:** We're working really hard on doing just that. The fact that we even need to do that is an indication of the threats that are presented to us. And fundamentally from a nuclear command and control standpoint, a number of things that we do are based on assumptions that we're going to have a certain amount of warning and we're going to have to either take steps to make sure that those assumptions hold or we're going to have to change our posture going forward. So we're working on timeline, on track on that effort.

Sorry, you have two other questions?

**DWG:** On that one, what's the end result of that process? What do you expect it to produce?

**Admiral Richard:** I am providing an input into a broader Department of Defense piece that along with U.S. Space Command, Space Force, Missile Defense Agency, you will see us put together the future architecture for both missile defense and missile warning. Those are two separate but closely related mission areas. My piece is just one of the inputs into that broader whole.

**DWG:** So the Navy is moving ahead this year beginning construction on the Columbia Class submarine. Where is STRATCOM in defining a requirement for ballistic missiles that will arm the Columbia beginning in the mid 2040s?

**Admiral Richard:** I have longstanding requirements on what I need for the missiles that go on that. I have frequent conversations with Johnnie [Wolf], the Strategic Systems Program on that. So the operational requirements that are needed are well defined and I would defer you to the Navy in terms of the technical requirements development to meet my operational requirements.

**DWG:** There are a lot of people with questions. I've given you two, I have to keep moving. We'll come back to you if there's time.

Dmitry Kirsanov of TASS?

**DWG:** Admiral, thank you so very much for doing this.

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On the New START again, as far as I know, and it was publicly announced, the United States and Russia had to suspend inspections activity under the New START because of the COVID pandemic sometime in the spring of last year, as far as I remember. So I simply wanted to ask if the two sides were able to resume the inspections activity. If not why not? And how the COVID pandemic is affecting your engagement under the New START at the moment?

Secondly, sir, and I'm sorry for being insistent, but what is your preference, a one year or five year extension of the New START if it comes to an extension? Thank you.

**Admiral Richard:** One, thank you for the questions. I do point to New START as the latest example of the relationship that Russia and the United States have had in an effort to make sure that we are transparent and we understand each other's motives when it comes to our strategic forces and our strategic deterrent. I think that that is a sign of a responsible great power and that is something that if you aspire to be a great power I think is an attribute that is necessary inside that.

As to the actual mechanics of the execution of the New START Treaty, I would have to refer you to the Department of State. We certainly support them from the Department of Defense side but I'm not directly involved in the decision as to whether or not to execute or not execute them. We do welcome the inspections and fully support them when we do them.

**DWG:** Steve Trimble, Aviation Week.

**DWG:** I have a question about the airborne component of the nuclear command and control system.

The Navy a couple of weeks ago surprised me a bit by letting it be known that they prefer the C-130J as a replacement for the E-6B in that mission. IT seems like you're giving up a lot of speed by going to a turboprop from a jet, for that aircraft to get on station to do its mission, especially a TACAMO mission. Your thoughts about that and if the C-130J meets your requirements and how it does so.

And the second part is, your E-4B is also coming up for replacement even sooner with the Survivable Airborne Operations Center. Boeing has stopped production of the aircraft its based

on today, the 747. Do you have to go to a twin engine aircraft to replace that platform? And how does that affect that mission?

**Admiral Richard:** First, I want to be pretty emphatic here that Navy is fully capable of supporting my mission requirements to ensure survivable communications to the ballistic missile submarines and I think they're making a great decision to go to the C-130.

Remember the goal here isn't necessarily to fly airplanes around. That's just how we accomplished the mission in the past. In fact we are conflating several missions in between the TACAMO mission to talk to the ballistic missile submarines, and the airborne command post. We did that conflation intentionally after the Cold War. But if you go further back in time they actually were done separately with optimized platforms for each mission. That's the direction Navy is headed in right now and I applaud what they're doing.

NAOC is an interesting beast because it often comes up in NC3 discussions and there is an NC3 piece to NAOC. However it supports a much broader national level stack of missions. There is any number of ways for options between four engine, two engine and many aircraft, and we were a part of what was called the [neat], analysis of alternatives. I'm very familiar with all this, but many of them meet my NC3 requirements.

Beyond that, I would refer you back to the Air Force who's actually doing the acquisition. You don't want to ask admirals about airplanes, right? At least submariners. In terms of the specific characteristics that the future platform will have.

**DWG:** On that TACAMO and bifurcating with ALCS. Do you expect the Air Force to acquire a new fleet to do the ALCS mission as well?

**Admiral Richard:** You're quite the subject matter expert because [Al Seas] will handle that yet another way. I'm referring to what used to be called [AVNCAP]. I've renamed that Looking Glass mission which is my command post. And remember, the goal here is a survivable command post and maybe it's in the air and maybe it's not, as long as it's survivable, right? So we're looking at -- I can't go into a lot of detail other than to tell you we are trying to achieve old standard by new ways to do it both better and probably cheaper.

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**DWG:** Dan Leone of ExchangeMonitor Publications. Do you have a question?

Okay, Idrees Ali of Reuters, do you have a question?

**DWG:** Thanks. Admiral, if you can talk about what you're seeing in terms of what other countries are doing in this two-week window before the inauguration. Are you seeing Iran, North Korea, Russia, any changes in posturing? Or is there a steady state you guys are watching carefully?

**Admiral Richard:** Idrees, one, thank you for the question. Two, I can't really discuss current operations, particularly those that I'm not responsible for.

You're quite correct, I run a worldwide command in STRATCOM. We as part of the broader Department of Defense are watching very closely and I have my forces fully mission capable and ready to address any threats that we face. And it is a good reminder of the nature of the threat that we face moving into the future, both near term and far term, and shows the need for us to recapitalize not only the delivery systems but our command control.

**DWG:** Richard Burgess, Seapower Magazine.

**DWG:** Thank you. Thank you, Admiral for doing this.

With regard to the Columbia SSBN, the Navy shipbuilding plan has the Ohio Class boats going out I think in fiscal '26. Were you consulted on your requirements for this plan so that you can maintain the level of deterrence that you need at sea?

**Admiral Richard:** Absolutely. Intimate relationship with them. Just like we do with the Air Force in terms of what the operational requirement is how, in this case, Navy's going to meet that. And I have the advantage. I think you know before I was here, I was the Submarine Force Commander. So very tight coupling from an operational requirement to Navy's ability to provide forces to meet that requirement.

**DWG:** Jeff Smith, Center for Public Integrity.

**DWG:** This is Dan Leone, I'm sorry. I fumbled my mute button

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earlier. Can you hear me now?

**DWG:** Yes, we can.

**DWG:** Thank you, Admiral, Richard, for making your day shorter for all of us.

In the latest NDAA there was a provision about the National Nuclear Security Administration and their first date to start producing multiple war-ready pits. Essentially the NDAA had some language in there that said, and I'll paraphrase here, if you can't do that then U.S. STRATCOM will have to certify that they can slip that requirement for multiple war-ready plutonium pits to the right by no more than five years.

In reading that I thought, well, what is likely to change other than the NNSA's own schedule pressures between now and then? Why not simply make the certification now and give the NNSA the window?

**Admiral Richard:** First, that requirement that you're talking about in this current NDAA is really not new. I already have statutory responsibility to certify NNSA's, [smudge] it to meet STRATCOM -- we say STRATCOM Requirements but they're really the President's requirements. I can't come up with them on my own. The President directs it. It's interpreted by the Secretary of Defense and the Chairman and then I go to execute them.

So the answer is I would love to go into a much deeper conversation on this. We could do an entire press conference on the weapons complex. I have a number of concerns over there and it goes far beyond plutonium pit production because that is a key one and it goes far beyond first production unit on any number of individual warheads. It's the idea that without sustained funding to the weapons complex we face points of no return that if we cross, we cannot recover for unlimited money for long periods of time because we will have lost a key piece of infrastructure or we will have lost some intellectual talent that we need. This gets into, I can talk to you about this in NC3, I can talk to you about future decisions in the delivery platforms, I can do it in a weapons complex. I am apprehensive that if we are not careful we will make an irreversible decision that will leave the nation without the capabilities it needs to defend itself and to execute its preferred strategies five or ten years from now which we can't buy back. None of us here will be around

to bear the consequences of it.

**DWG:** I look forward to that press conference on the weapons complex. I'll be in the front row, Admiral. Thanks, guys.

**DWG:** Theresa Hitchens of Breaking Defense.

**DWG:** Thank you, Admiral, for doing this. I appreciate it.

My question is about NC3 Next and the NDAA. The NDAA had a provision in it that called upon DoD to provide to Congress a report that had a whole slew of requirements from a ConOps -- for cybersecurity. So from a ConOps plan to a schedule to resources, requirements and to roles and missions about who's supposed to protect the NC3 system from cyber attack.

And I'm wondering if the NC3 Next effort, I know a lot of it's classified, actually will go some way to answer those questions for Congress about resiliency and cyber protection for the network.

**Admiral Richard:** One, Theresa, let me start with I welcome that language inside the NDAA. There is a very visible endorsement of the importance of NC3 and the steps that we have to go do. I look forward to providing that report to Congress because we're already doing all of that. So we already have that concept. We already have those responsibilities defined, so it's simply a matter of writing it all down and reporting it to Congress.

So yes, NC3 Next is a piece of that, but NC3 Next is a system where, and it will provide some new and additional capabilities related to cyber defense. The NDAA actually gets more into how we operate and how we defend the system which is also what the NEC is working very hard on. And I will be pleased that we will have some very good news to report back to Congress when we put that report in, I think it's in October of '21.

**DWG:** Can I follow up to ask about the NC3 Next program? Can you elaborate? I know that it's hard, but could you elaborate a little on where that's going and the schedule for that? What you're really trying to achieve with that.

**Admiral Richard:** Sure, and by the way I should have mentioned in the previous question, we have a very close relationship with Cyber Command. General Nakasone has provided very strong

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leadership and support in cyber defense write large, prioritizing NC3 specifically.

A key thing to remember about NC3 Next Gen is that it's not a thing. There will be a day when a Columbia shows up on the pier and we'll all be standing around, there will probably be another press conference, and we're going to operate Columbias for 42 years. There will be the day the B-21 is sitting out there on the ramp, and again we'll all be standing around admiring the thing and we'll fly it for decades.

Command and control doesn't work that way. So we refer to it -- NC3 Next Gen Inc. 1 which will be followed by increment 2, iteratively 3, 4 and 5, so this will be an evolutionary thing. We've defined increment 1. That's what in -- forgive the Pentagon speak, it's in the POM. It's in the program of record that we have. That one, like I said, it improves our posture in space, it improves hardness to emerging cyber and cryptographic threats. It de-legacies a lot of the existing command and control, right? We finish up modernizations to get me off reverse compatible and older legacy modes which in effect also improves its capability and it starts to give me the ability to dynamically reconfigure.

Theresa, forgive me, I've kind of got to stop there in terms of the specific attributes. We have the full list. But that coupled with the experiments that were running in the ConOps development will then define increment 2 and we'll iteratively move our way forward in a much faster update rate than you do with delivery platforms.

**DWG:** Sean Naylor, you're next, but let me just take the privilege of the moderator and follow up on one thing on this NC3, sir.

I understand that there's a move towards integrating both conventional and nuclear command and control, sometimes on the same systems, the same satellites, whatever. Assuming I'm right about that, might that not be a trend which could be destabilizing in the sense that it could cause an adversary to think I don't know which this is and I have to react?

**Admiral Richard:** David, one, it's important to remember that our nation and no other nation has ever had completely separate nuclear command and control from conventional command and

control. They have always been intertwined. What was the first emergency action message? Actually it was a telegram from Truman coming over on regular command and control. So there's no move to do anything differently than what we have done in the past. And again, it gets into what pieces of your nuclear command and control have a higher standard, higher requirement, you need something different about those that you're in some cases willing to pay extra for and put additional complexity into your system relative to where is it that the existing command and control systems that you have actually work great, you don't have to pay extra for them, allow interoperability.

We're probably going to get to a conventional nuclear integration question here very shortly and you can't integrate conventional and nuclear if they're on completely separate command and control systems, or at least it gets a whole lot harder. So we are very thoughtful with regards to that.

Again, the idea of attacking your opponent's command and control is as ancient as shoot the guy with the antenna and then shoot the guy beside him, right? So this aspiration is not new. Then how you make sure that you have protected yours, which provides you a deterrence advantage, while not incentivizing the opponent to do something you don't want him to do. We will be as thoughtful this time as the nation always has in that.

**DWG:** Thank you.

Sean?

**DWG:** Admiral, there's probably no greater responsibility for a President of the United States than the sort of control of and understanding of the nation's nuclear weapons. With that in mind, have you or your staff had an opportunity to brief the incoming Biden administration's landing teams on your command and if so, how did that go? If not, why not and do you have any plans to?

**Admiral Richard:** I have already had briefings with the Biden transition team. They went very well. Look, I was counting it up earlier today, I think since I've been wearing a uniform I'm on my 7<sup>th</sup> transition of administrations. This is just the next one. This is how our government works. I'm a military officer and I will serve any administration. This one is no different.

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So they have gone well, we have some more planned in the future that we're working on, and we're fully ready to support the Joint Staff and OSD in any other briefing requirements that they may ask of us.

**DWG:** Dan [Saglan]?

**DWG:** Thanks I've got a two-part question.

What does the low yield nuclear warhead on a submarine do for you? Do they increase deterrence because they're more usable, because the death and destruction they wrought is less? Does it give you more flexibility than larger nuclear warheads?

**Admiral Richard:** Remember the bottom line, what I'm trying to accomplish is to get the other guy not to shoot me, right? And the fact that Russia has several thousand non-treaty accountable weapons is evidence that they at least perceive a deterrence gap where they think they have an advantage and that we would not be able to respond. The low yield nuclear weapon, and really you're referring to the ballistic missile one. We have long had low yield nuclear weapons they're just on different delivery systems, enables me to close that perception gap and it improves deterrence and it improves the defense of this nation and our allies.

**DWG:** My final question is, if President Trump were to order a nuclear strike on Iran because he wanted to destroy their nuclear program, would you carry it out?

**Admiral Richard:** First, I get asked this question a lot. My predecessors have been asked this question. Bottom line, look, I will follow any legal order that I am given. I will not follow any illegal orders. And if you go much further, if I were to say anything else for starting to call in civilian control of the military, which I think is a prized American attribute, fundamentally who has the authority to do that is a political question. If you ask me my best military advice, the system we have has served us well for 70 years. I don't recommend any changes but I'm prepared to execute whatever the political leadership of this nation would like to do.

**DWG:** Richard Abbott, Defense Daily. My screen shows you were off of mute then back on. Perhaps we better move on.

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Jeff Seldon, Voice of America. Do you have a question?

Mike Glenn of the Washington Times?

**DWG:** My question's been asked and answered so I'll just pass.

**DWG:** Chris Woody of Business Insider?

**DWG:** I'll ask regarding the B-52 modernization specifically. Admiral, could you give us some update on that and kind of elaborate on how that modernization will keep that bomber going and relevant as it approaches 100 years in service? The airframes 100 years on service?

**Admiral Richard:** One, I think the B-52 modernization is going quite well. There are some NC3 improvements that go into that mix on top of the ones I think people are more generally aware of with the new engines, the radar upgrades, et cetera. So I applaud the Air Force and in particular Air Force Global Strike and General Ray who have put together I think a very thoughtful plan to balance the need to have aircraft available to modernize them relative to having them available to conduct deterrence and conventional missions. So I'm satisfied with where we are with that.

**DWG:** Jeff Smith of Public Integrity, your mike apparently has been fixed.

**DWG:** I hope it has.

Admiral does your world intersect at all with Solar Winds or any related software? And do you consider yourself a target, an active target of that kind of intrusive hacking now? And have you seen any evidence of it either by Russians who were named today in a statement by the White House or by anyone else?

**Admiral Richard:** The short answer is we're very well aware of the recent cyber events. My NC3 systems are fully mission capable. I have seen no indications of any compromised, mal-operation. We run these things every day and we test them all the time. We're continuing to follow, you know, this is an evolving situation. We had to do a few -- we follow the same guidance where it's applicable to us that Cyber Command and Joint Force Headquarters [DODAN] puts out. We've done a couple of targeted things on top of what we do day to day. But I'm fully

mission capable.

You asked me are we targeted. Well of course we are, right? Trying to attack the other guy's command and control goes back to throwing rocks at each other. That has been one of the -- the NEC, and I'm looking at Ron on the screen and I'm so very proud of them. They've done so many things it's hard to list them. One of them is fusing all of the threat intelligence against the NC3 system. Inside the NEC one of its subcomponents is called the NIFC, or the NC3 Intelligence Fusion Center. So we now have best available, good focus from the intelligence community, standardized, available to everybody so that we understand the best that we can the threat that it faces, and there's certainly a threat. That's what warrants us and requires us to modernize and improve the systems. But she's secure today and I'm fully confident in it. I've not seen any indications.

**DWG:** Could you just answer the question about whether you have, any part of your world intersects with Solar Winds or its software or related software?

**Admiral Richard:** The bottom line is NC3 is different and it operates in relative isolation. We operate the systems differently. So no, I don't have the same threat vectors that the larger federal government does when it comes to this particular threat.

**DWG:** Robert Ackerman, Signal Magazine?

**DWG:** Thank you, Admiral.

[Compared] to NC3, how much will changes to our strategic modernization that might be implemented by the new Biden administration affect NC3 modernization?

**Admiral Richard:** The bottom line comes back to any changes that we wish to talk about in terms of the nation's capabilities, whether that be in the delivery systems, in its command, control. Remember, part of command and control includes warning as well as the weapons complex, basically is going to drive you to have to reexamine your strategy. In fact that will be one of my responsibilities is that if there's a change in the capabilities that the Commander of STRATCOM has available, I'm obligated to go back and then report what I can and can't do relative to the tasks that I have been given and I'm fully prepared to do that.

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**DWG:** Brian Everstine, Air Force Magazine?

**DWG:** I was wanting to go back to bombers. A couple of months ago General Ray talked a little bit about the number he hopes to see. He said about 220 total including about 100 B-1s. He said that number is living and could grow depending on how capabilities come on.

Do you have a number in mind of what STRATCOM would like to see of total bombers available?

**Admiral Richard:** Well, I just would like to make sure General Ray has enough to execute the things I ask him to do. I'm not trying to be completely flippant, right? My requirements are only a subset of the overall demand signal that General Ray has to answer for bombers.

I've been a part of and have been inputting into what I think the Air Force as a very robust process to set its bomber roadmap and the total force size that it needs, acknowledging the competition for resources that the Air Force has to go do. So I'm confident that General Ray and the Air Force will continue to provide STRATCOM the airborne capability that it asks for.

**DWG:** Mallory Shelbourne, USNI News?

**DWG:** Thank you so much, David, and thank you, Admiral, for doing this call with all of us.

I wanted to follow up on some of your comments about the Nuclear Posture Review. I know you said it's too narrowly defined. I'm just wondering in light of the Navy and the Marine Corps really recalculating for a specific kind of threat with Russia and China in the Pacific, can you just talk about how you think the Nuclear Posture Review could be reassessed in light of those goals?

**Admiral Richard:** I guess what I'd start with is the idea that any service, any force, anything that the Department of Defense does is underpinned by an assumption that strategic deterrence, and inside that nuclear deterrence is holding, right? And if strategic deterrence fails and in particular if nuclear deterrence fails, then we just ripped the underpinnings out of every O plan and the ConOps for every other capability inside the department. So by whatever review mechanism we go do, whether we

do it in pieces or we do it as a whole, recognizing that and acting accordingly I think is very important.

**DWG:** Can I take the privilege of the chair for a second to ask the Rear Admiral a question? If your system is up and working. I'd like to just ask you to tell us what is the goal of your center and how's your work going? What difference is it making right now that you would like us to know about?

**Rear Admiral Fritzmeier:** Sure. I think Admiral Richard may have mentioned it earlier, but I think the best way to characterize the NC3 Enterprise Center really is that notion of an orchestra conductor. As has been noted, we've had the NC3, which is actually comprised of many, many systems provided by the services and other agencies of the department for decades. The challenge that we have as we're seeing the threat environment evolve and especially the pace of change evolve, how do you ensure basically the synchronization of all of the activity so that your modernization produces truly NC3 Enterprise level effect and that you don't end up creating critical gaps or misses in terms of mismatch between interoperability of systems in that enterprise.

So the Center was created with the very intent of saying I'm not a program office, I'm not going to be "acquiring" NC3, but I am going to be providing the oversight in terms of, as Admiral Richard mentioned, ensuring that the operational requirements as we look into the future as well as the enterprise level system engineering is done in such a way that all of those actors that we have producing capabilities for NC3 that are evolving and more rapidly as we go, are done in such a way that we produce enterprise level effect.

So my job is to help provide essentially that guide star, if you will. So in terms of the enterprise system engineering, we have established across the department a board that helps ensure that we're coordinating the right standards necessary for all of the different players across the NC3 enterprise to do their work as we move forward. So maybe that's the best way to sort of capture that.

**DWG:** And you're the first Director, right?

**Rear Admiral Fritzmeier:** No, the Center was actually created just about two years ago. I took over as the Director not quite a year ago, having been the Deputy Director for about six months

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prior to that.

**DWG:** Thank you.

I notice Patrick Tucker that you're on and I wonder if you have a question. Defense One. No?

Then let me open it up because I've gone through most of the questioners that had signed up and that we had on the list.

**DWG:** I have a question. This is Sandra Irwin, Space News.

I have a question, Admiral Richard or Admiral Fritzmeier, if you'd like to comment. The Space and Missile System Center is working on some new satellites that they say will support NC3 requirements. I was just wondering how you're working with them, how is your coordination with SMC? Do you actually inform how they are doing the satellites? How they're developing these satellites? It's going to take several years, but they claim that that's what STRATCOM requires for the secure NC3 mission. Thank you.

**Admiral Richard:** Fundamentally what I and the NEC do is set the operational requirement, so we have a definition operationally of what we need for protected, survivable strategic communications. So no, we don't work with them directly. We do work with the Air Force and the Space Force who then translate our operational requirements into technical requirements and then their acquisition process kicks off and SMC is a key part of how that happens.

So we're ultimately where the operational requirement came from and then it's over to the services in their program offices to produce that.

**DWG:** Admiral, when I was asking you about the Russian hack you said this is an evolving situation and that you've done some targeted things on top of what we do day to day. Could you clarify what you mean by that please?

**Admiral Richard:** Sure. Cyber Command and Joint Force Headquarters [DODAN] gave some specific operational orders. The ones that were applicable to me, we went off and executed. I can't go into any specifics because it would give you an idea of exactly how our systems work, but there were a few targeted

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actions that we took.

**DWG:** What does targeted actions mean? Sorry. It's unclear.

**Admiral Richard:** They're very narrow, small things that we had to do with some specific pieces. Remember, NC3 is 204 systems. There were a handful of actions on a handful of systems that we took action on.

**DWG:** And did everything come out the way you wanted?

**Admiral Richard:** Everything's great. My system's fully mission capable, I don't have any indications of compromise, I don't have any indications of mal-operation. So yes, everything came out the way that I wanted.

**DWG:** Thanks a lot.

**DWG:** Admiral, any closing comments you'd like to make?

**Admiral Richard:** Just this reminder. I thank everyone for their patience on what can be a touch of an arcane topic in terms of NC3, but it is as equally important as any other piece of this mission.

I just want to close with, you'll hear us talk about this as the most important mission, number one priority even foundational that has kind of a touch of an academic tone to it. Right? It's the idea that everything in the Department of Defense depends on me and my forces making sure that strategic deterrence holds because it's an assumption in everything else that we do. I think it's sometimes lost in terms of the importance of this. It's not a thing that's done off to the side for its own sake, it allows the rest of the department to do the rest of the work of defending us and our allies.

So I thank you all for this. Great conversation. I look forward to our next opportunity.

**DWG:** And I hope we can do it in a year's time, sir. We'd really appreciate having another session with you. Thank you very much for the time, both of you gentlemen. And ladies and gentlemen of Defense Writers Group thank you for joining us today. More to come soon.

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