

AIR, SPACE, AND CYBERSPACE POWER IN THE 21ST CENTURY
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DAY TWO

SERVICE AND COMBATANT COMMAND PERSPECTIVES

2:00 – 4:15 PM

General Duncan J. McNabb

DR. CHARLES PERRY: Ladies and gentlemen, can I ask you to come your seats. For those who are standing up could you perhaps come down and take a seat and get settled. Let me welcome you to the final session of this conference in which we will have the unique opportunity to hear from six of this country's most senior and experienced combatant commanders and service leaders. Together they represent virtually the full spectrum of today's major operational commands and strategic planning centers and including key, geographic combatant commands, key functional combatant commands and the top echelons of our military service headquarters. We are delighted to have you all with us.

In their various capacities moreover, each of our panelists today has a decisive role to play in designing, fielding, training, exercising and, unusually together deploying US military forces, including many of the aerospace capabilities we've been discussing for the last two days—to address the increasingly diverse range or regional and global security challenges of that United States and its allies and partners must now prepare for.

In performing these multiple tasks they have all acquired years of hands on experience in the areas of joint and combined force planning, capability assessment and global force management, conventional and irregular warfare—security cooperation and building partner capacity and civil military coordination, of course, to include what we've been discussing and know to be a whole of government and perhaps a whole of society in our approach to security issues.

So they bring to our discussion a very indispensable reality check with regard to what is feasible and desirable both in terms of current operations and in terms of future requirements.

Now, since this is the last session and given the talent at the table, and in the interests of giving them as much opportunity to share with us their thoughts and perspectives as possible—I'm not going to spend any more time setting the stage and the scene. I don't really have to with these gentlemen. But let me just briefly introduce the panelists in the order I've asked them to speak, to give you a little bit more flavor, perhaps.

To open this discussion we will turn first to General Gene Renuart, who as commander of NORAD and US Northern Command is responsible, as you all know, for providing air, maritime warning for Canada, Alaska, and the continental United States—but also, at the same time, preparing for homeland defense and civil support missions over a broad area of responsibility. This stretches from the Arctic to the Gulf of Mexico and parts of the Caribbean.

Next we will hear from General Duncan McNabb, Commander of US Transportation Command, where he manages all of DOD's air, land and sea transportation assets in support of a wide array of joint and multinational strategic mobility and supply chain management missions—the critical importance of which is being driven home, yet again, at this very moment in the US military's remarkable response to the earthquake in Haiti. And I know we will be hearing about that from General McNabb.

Lots of old friends out there, General Shaw, as always, and General Brady and General Hoffman—you know, great teammates, folks that we kind of grew through this. So lots of great friends out there that I really enjoy.

So what I thought I would do is I thought is I would use what we are going in Afghanistan, especially after the President announced, “Hey! We are going to move additional forces there. We need that to happen quickly.” And then, how you kind of go about that. The second portion, as I mentioned to Dr. Perry, and he said, “Yeah, I would love to have a little extra time.” I have most recently gone over and talked to members of the NSC, went over with the Chairman and I kind of showed—it’s unclassified. But it’s, “Here is how all of this logistics is fitting together in support of SOUTHCOM.” And I thought it would be kind of appropriate given all the things going on.

But it will tell you about relationships and it will tell you how important it is that you think about this, not only in a joint world but also in an inter-agency way—and really, intergovernmental. And I will also say, all of government and then I will go international. Because in this case, this morning I briefed the administrator of USAID and he really is at the forefront of our country, while we are supporting SOUTHCOM as the supported SANC(?), combatant commander. I will tell you that he is hand in gloves with the USAID administrator, who is basically got the lead for our government. So that’s how this all fits together.

So with that I thought I’d show some slides. I wish I had some music. I mean I should have—Gene Renuart, he always has some music. It is always good. Go ahead and bring up—what I’m going to do is I’m going to walk up here. But if I start getting really close out here, you guys yell. You got all of that? That would be good.

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We will see how this works and then maybe I will come down there is we don’t. One of the things that I—and this gets to General Renuart, what he talked about, is when you

think about the requirement, you think about how a mission is given, it's always given to one of the theater commanders. And they are given that and then they have been given the mission. Okay. To General Petraeus. We've got to do some additional—your mission in Afghanistan, your mission in Iraq, OEF, OIF.

He is given the mission. He established what he needs to do that, works that with the services, like Admiral Greenert. And I will just tell you that Greenert—and I will tell you that that part goes on and they establish that. They have a little discussion, say this is the forces we need. They come to us and say, "Here is what we got. They validate, this is what I need to move. They work with joint forces command on providing that force. And, again, the services. And then we work on, "Okay, this is when you move."

And before we used to just kind of take that and we would give it to air, land or sea. And that was kind of how it was. As AMC commander, and General Schwartz was the TRANSCOM commander. He would give me the mission. I would go execute it.

But, as we've gotten better at this, we do intermodal. We go between modes. We will go and do this by sea or by air. And then we can also think about, can we go commercial versus military. And we do it by surface. Can we interchange because that is of great value to the taxpayer. But it is also—in some conditions it is the very, very best way to go. And many folks don't know that we are doing the re-supply of OIF and OEF, primarily using our civilian partners.

The Pakistan lot, coming up through Pakistan, is all done commercially using US flag fleet, US carriers, both air and sea, and they take care of it and you would never know that. Our northern distribution network, I will talk about that in a second, but same way. It is done by our commercial partners that are very much part of our transportation network. Good for them. Good for us.

And it ends up being very good in, for instance Haiti, you are going to find out as I go through this that we went to our commercial, some commercial companies and said,

“You know, what can you provide?” And, no surprise, they can do an awful lot. And they are at the forefront of this and doing great things.

As you do that, obviously, the international community or as you think about transitioning, everything starts going smoothly, they will go, “Hey! We’re good. We can use those commercial contracts. Now we can give you the military back and you are ready for the next thing.” So this all works very well, something General Fraser and I talked about yesterday. But I will just say that that is going on in a very big way.

And the big thing is, we also have a relationship where we will come back and talk to the combatant commanders and say, “Right now we may have to slow you down a little bit because we are going to have to focus on Haiti.” That discussion goes on with General Petraeus. As we see what exactly can we do, I will say that if you think about a hurricane, it would be NORTHCOM that we would be working with General Renuart and saying, “Okay. Here are the different things we can bring.” We work that together and you end up having a very dynamic discussion all through that.

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We do have locations around the world. These are relationships. And I will tell you in many cases this is a contract or a single civilian or a couple of civilians at these different locations. It might be embassy support. We had a team down in Pago Pago that I’ll tell you, after the tsunami hit American Samoa and Samoa that, in the end, it was that relationship that allowed PACOM and PACAF to respond so quickly—because we already had people on the ground that could immediately say, “Okay. You can bring C-17’s in. The airfield is good. 747’s in. You can bring that.” And so what happens is that all pays huge dividends for us.

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And then I would say, you think about this thing as a pipeline. I call it a bridge. You all think about the 14th Street Bridge. If you are in the middle of a—and I will use a disaster as an example. Let's use Haiti. If you think about Haiti and you think about the 14th Street Bridge, it is very similar. If you had a problem and you are sitting over in the Pentagon, or you are sitting in Virginia side(?) and you had a problem in D.C., which included destroy half the 14th Street bridge, the thing that you don't want to do is put a bunch of stuff on 395 and jam up the bridge. Right? Because that is the worst thing you can do if you are trying to get, if you have to prioritize, you say,, "I have to get life saving across."

So the first thing you do is make sure you got room to get stuff across that bridge, make sure that you can get lifesaving there that has room to go across. And you want it to go across very quickly. The next thing you do is start taking across stuff to rebuild the lane on the bridge. And then as you've got time, you build an additional bridge. That's what you do during a disaster. And that is when you say that this is a pull system, when you get the combatant commander and he says, "Okay. Just slow everything down. Get your capacities, get your capabilities, put them in the parking lots all along I-95 or I-395. And then when I call it forward it just zips all the way to destination."

And right now that is fleet hospitals. You know, that's water. That's food. It is whatever the folks on the ground say, "This is what I need next." And the worst thing you can do is jam that up." That's how the system, as we talked about the RAMC, that's how this works.

So really good stuff but I will just tell you, it's flow control at the beginning. For instance, as we move stuff to the ports, I will tell you that the movement across the theater or across the strategic level, okay that's what TRANSCOM does. But then, it gets into the theater and you got to make sure that that pipeline is the same all the way through. So right now we are making sure stuff gets to the ports. Then we are making sure we have enough capacity to take it back and forth, certainly on the way there.

And then we make sure we can make that we can make it across the beach or through the port. Then we turn it over to the distribution centers and they will then get it to where it needs to go. So that's the whole part that you are doing and that is going on in Haiti right now. And, quite frankly, that is what is going on in Afghanistan. And that's how Iraq works. And it's the whole thing because at the end of this, this is the Haitian people. That's who that is. They are at the end. And they don't care how the rest of this system works. They are assuming that we are doing this and it's all orchestrated. And you can slow down the flow because the worst thing you can do is jam that 14th Street bridge. We basically control that flow by doing that.

We have, as the TRANSCOM commander, I have the DPO, distribution process owner. I have a span of influence across the whole thing. I only own this part. But I can sit there and say, "As the DPO, here are some smart ways to do that.

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This gives you an idea of Pakistan. What many folks don't realize that as you come through, you know, there are about 12,000 containers in that pipeline heading towards Afghanistan, at all different parts. And what you want to do is hold it in Charleston until it goes all the way through. It never stops because you jam up.

I will also say, this approach allows us to use our allies. It allows us to work with our allies with the countries, the international team. And we can mix and meter by working with them in their capacity that they have to insure that we are doing this right. And I will say that again, you are going to end up having a pipeline at sometime you are going to cross that border and that funnel gets very small and it gets large again. So, again, you've got to tailor the operation so you take full advantage of that.

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I talked to—one of the things that we obviously have to put up with, again, as you think about this in a global nature—General Renuart and I are going to talk next week with, on Monday, that we are going to get together with Admiral Fadallan(?) of Coast Guard. And we are going to talk about port security. I will tell you that one of the things that Admiral Greenert and I talked about was piracy.

We said, “Okay. How do we get at this? How do we best together figure out how we team along with Coast Guard, along with MIRAD, along with all of industry,” to say, “How do we get at this because our folks are at risk? How do we collectively do this?” Admiral Gorteny(?), force(?) combatant, you know, the theater commander for that portion, he is obviously working with us. But we are trying to figure out, how do we sort that out from an interagency and in inter-DOD standpoint, inter-service area.

So lots of work doing there. I will just tell you that in general we are always trying to figure out how they are going to try to slow us down because those combatant commanders, the folks on the ground, absolutely depend on us. And there will be people that say, if we can slow them that will give us an advantage. So we try to make sure that they can't slow us down. And it takes a huge effort. That includes cyber. So, just to throw that out.

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Also, there is always that idea of at some point—you really want to talk about, can you do it better and save money? The intermodal portion is huge. It's the same thing that we found in supply chain in general, is that if you do this right, you can save a lot of money and even give better service. This is huge, about \$3 billion dollar avoidance since we put the DPO. And that is DLA. That is all the players figuring out better ways that we could do, move stuff by surface when we can, move it by air when we must. And all that goes in again. That is something General Schwartz pushed very hard when he was the combatant commander for TRANSCOM.

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So let me just use a couple of examples, Afghanistan. Landlocked country. Very high terrain. Very interesting neighbors. When you sit there and you say, “Well, let’s pick a place,” and I get to sit and tell the Secretary of Defense that and our other national leadership. And I basically say, “Now, if you wanted to pick a place that is hard to get into, this is probably it.” And so you sit there and you think about, “Okay. Landlocked. How are we going to do this? How are we going to make sure that we can take care of that force?”

Five major ways to get in. We have to make sure that we take advantage of that. Again, something that General Schwartz along with Admiral Fallon before, when he was CENTCOM and Schwartz was TRANSCOM—they had started talking about, can we bring in more stuff from the north? Something that General Petraeus and I talked about as he took over and I took over. He basically said, “I would like you to help us do that. See if we can build something from the north to take advantage of our ability to take advantage of gates that come through the north side.

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Now the reason that that became so important is, if you look at the Pak LOC, total commercial. Obviously, the attacks on those line, fairly fragile, you know, very fragile lines. This is what we were depending on. If you want to be the TRANSCOM commander, this is not the very best place to betting all of your money. Because in the end our job is to make sure General McCrystal and General Petraeus never have to worry about it.

So I will tell you that, obviously, there are some problems. You know, there is theft and pilferage, border delays, weather, all those things. But I will also say Alexander the Great, “Our logisticians are a humorous lot. They know if my campaign fails, they are

the first ones I will slay.” So, Loran Reno, this is you. So when General Schwartz looks at you, if the logistic fails, you are the first one he slays.

What is bad about this is Secretary Gates said this to me when he handed the flag, as I took command of TRANSCOM. And I said, “What are you saying, Secretary Gates? What’s exactly going there?” But I will just tell you, that’s the importance of it.

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Here is the northern distribution network. So what we did is we went to visit those countries along with CENTCOM. General Petraeus also did that. We made sure that we did this together. And, basically, we visited them all and we say, “You know, we would like you to join this network. We would like you, if it is in your interest, it is totally commercial. We will use our commercial carriers and your normal stuff. I will bring economy to you. It will bring pre-sys(?) stability to Afghanistan.” And all of them said, “Yes.”

So you end up having quite a few routes that come in. And it is a network because you don’t have one way coming through. You want a number of ways to get through. And I will just tell you that as we sit there today, it’s been over 6,500 containers that have come through the northern distribution network. We got about 5,000 containers en route. So if you remember that south part, it was about 12,000 containers. It gives you an idea.

Right now about 50% of our stuff comes by the surface through Pakistan. Thirty percent comes by surface through the northern distribution network and 20% come in by air. All of the sensitive stuff, all of the lethal stuff comes in by air, which obviously is very expensive because you are looking for ways to make sure you maximize that.

But the partners are the ambassadors. It’s the Department of State, OSD. It’s working with the host countries. It’s the joint staff. It’s everybody coming together, CENTCOM in

the lead, us supporting and saying, “How do we get at this? How can we make this right,” and working that together. And I will just tell you, this was an inter-agency approach that made this all work. But it’s been certainly huge now as we’ve done two surges into Afghanistan.

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The other thing that we did was, what if we lose the grounds locs? Obviously, Pakistan we said, “You’ve got to be ready to do a Berlin airlift. You’ve got to be ready to have the capacity to increase just like the Berlin airlift. You don’t want to bring everything in by air. But that is your ultimate ace in the hole. So when you think about air mobility, think about Ray Johns and what he had to do, it is to make sure we have the capacity there to make sure that we can get the stuff through—if it is slowed down so we can keep everything on track for, again, General McCrystal and General Petraeus.

A lot of work has been done to be able to do that, to increase capacity. And this is where I was last week. This time I was in Afghanistan. I left Tuesday night for an all night flight to Afghanistan and that is when Haiti hit. So I was sitting there going, “Okay. Now, should I go back? I will be back in four days now.” And by then our folks were working very well. But it was the same idea. How do we make sure that we this as aggressively and as quickly as possible. Again, the ones who set that are General McCrystal and General Petraeus because it is not just the movement. It is getting the forces ready. It is also being able to receive the forces on the other end. So that is always being worked and we wanted to make sure that we can meet those.

But this gives us our ultimate ace in the hole. And, again, great work being done. And Chief, I’ll just tell you, I was very impressed by everybody and how hard they were working.

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Other thing is, is how do you distribute within the country? I will just say that when you look at airdrop and how much it has increased since 2005, this is in the AOR. But 2005 we did two million pounds of air drop. In 2009 we did 29 million pounds. That gets convoys off the roads. It frees up vertical lift assets to do their operational missions, helicopters. And it really does save lives and gives options. And maybe the easiest way to get to some of these points, especially, as we disperse the operation.

A huge impact, all the way from—go ahead.

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--All the way from precision air drop, if the weather or the threat demands. You can go all the way from high altitude down to low altitude low cost air drop, which you come in at about 150 feet and 150 knots and you drop it very precise. Something that the Army picked up and the first C-130s are going out there now, Chief. And so that first bunch, they are really excited about them. They are going to go out there and do that air drop and, again, it's disposable chutes, very low cost. The chutes are already packed and they are throw away. So it really, some great opportunities here.

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And now, let me talk just unified in GAY(?) response right now.

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I will just say that my intent that I—you know on Monday I said, okay, here are the things that I see. Requirements. What will it be? Hard to identify because you are sitting there and you don't know what's happening on the ground. But it takes about 200 to 250 TEUs, that is 20-foot containers equivalents, to take care of about a million people. That's about right, about 100 for water, 100 for food, 100 for others like medical.

So I just say we put that on. And, of course, if it is two million, it will be 500 a day. So we said, why don't we start at 250 and then we will up it as we go, maximize the air bridge, which is already happened, opening the surface bridge, get the sea lift capacity going, the port off load capability, how do we get it into the port, especially when the port is destroyed, and then load the bridge. Load the bridge is on this end to make sure the stuff where we say, "Hey, bring the stuff to Jacksonville. Bring it to the Everglades. If you bring that in, then we will get it out." So I will just show you that.

Then establish some high-speed lanes. High-speed lanes are like air drops. High-speed lanes are like the high-speed vessels that can go very quickly, that can get that, keep everything else rolling along but you've got a couple of aces in the hole. And that's what we've done. Seamless link with the theater distribution. Obviously, if we get it across the beach, it doesn't do us much good if they can't take it and get it off of the port. So that's that theater distribution link.

And then, as we do this, then we will work on making the flow more and more precise, where every day they can say, "Hey! I don't need as much water now. I need food. I need plastic material because it is about to rain. I need lots of medical. I need hospitals." This is what allows us to do that. So that's going on right now. This is exactly the slides I showed the administrator of USAID this morning.

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Here is that air drop. I will just say, "Joint Task Force port opening." The comeback controllers went in there first, looked at the airfield, made sure we could begin a flow. They started doing the air control. It went great. So you look JTFPO alerted. AFSOUTH set up. First SO(?) goes in. Three, 23, 65, 120, 169—I will just tell you, you think about that over a very short period. Again, that is something General Schwartz did when he was out there. It really is superb that you did that.

And that is something. And a lot of those are international flights. But I will tell you what. It was that team that went in there and sorted out and said, "Here is how you park it." It is the combat controllers Free-do(?) that went in there and set that up and started controlling the air space. Nobody could do that. But a very good sequence. And then we sit here today. It really has made a difference. Two aerial deliveries already. Second one this morning. It went very, very well. And we got a number of bundles.

And as I tell them, Air Mobility Command is ready to go in support of the Army to make sure that they, if they decide to do more drops, everybody is set to do that. So, again, that is AFSOUTH. That's combatant commander, General Fraser and it is his call, working with the folks in theater, General Keene and then just say, "Which way do you want to do?" We begin the commercial flow in there and they are building up capacity at San Acedro, which is an airfield in Dominican Republic.

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Here is the surface bridge, Norfolk, Jacksonville, Port Everglades. The MSC, the organic support has started and some of that is already arriving. And out of Port Everglades we've got Crowley and they already, their first ship has arrived at Hana(?) Port and is beginning to transition back to Port-au-Prince. And then Crimpson(?) Lines out of Jacksonville, that has all started. So just say that we are already passed that 250 capacity. So it begins and they are starting to arrive.

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Here is, as you look at the pier. I'll go through this later. But the LCU's, Crowley container ships, so a lot of things going on. The US Naval Ship Lumus carrying Marine HADR equipment, lots of other things to be able to open up that port—really good stuff going on. Again, talked about the Crimpson Lines. I tell you that the Army Navy J-lots, again, Admiral Greenert, that's been great and how they have worked through that.

All of that stuff is on the way and it is getting set up. I will say that if you look at this picture, the port is completely damaged but this beach is what we are talking about coming over the beach using J-lots. So really, in both commercial and then using our military capability.

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On the seaport operations, this is the—as you open up that port, this is kind of who we done it. Military J-lots. Here's commercial operations and then peer operations. This is how, coming over that port, as it grows and J-lots gets in there, you can see how quickly that grows towards 1,000 containers a day. But over time—but, you know, you are talking right now 100. And by the 24th, up at that 310, 320 capability.

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Cumulative increase, discharge capacity and throughput. It's all coming. That is all starting to hit there now. And now we've got to make sure the distribution portion works.

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To give you a feel, this is our capability come over the shore. Obviously, this we're set to take a large force if that is required. Again, this is Navy. It's Navy, Marine, and Army. Great capability from crane ships all the way to floating barges, taking them out there and all the way to doing fueling over the shore.

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This is the causeways that you will hear about us setting up. And then you take off the large ships and you off load.

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And then you end up beginning to use these lighterage to be able to go—for LCU, arrived last night. The second one arrives today. That is what you are hearing about that is already arriving, as you think about how quickly this is coming. Improved Navy Lighterage System is huge on its capability and that's if you can think about those beaches. This is the kind of thing that you put in there to do.

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And here is where you end up, Army Trident System, same way. This gives you an idea, if you think about those beaches. This is what's en route now and will be set up over time. Here is the Navy elevated causeway system, LCAS. Again, you can imagine what a difference the will make to a damaged port, to let them fix the port while we are delivering re-supply. All of that is happening. So it's really, really a great story.

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This kind of gives you an idea of those different places. Again, this was the hardest match. Once we get it on, obviously, here is a good road and some fairly decent places to store containers. But what you would really like to do is have that stuff come off that ship, put on a truck and the truck goes to the distribution center. You know, that would be the simple way to do it. But, ideally, you know, that is what they are setting up now.

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This just gives you an idea of all that stuff that is en route. And when it becomes operational—and I'll just tell you that you put all this together, it is all different parts.

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And then I just—go ahead and build that all the way out. But given on Monday saying, “Here are all the things that we need to do,” I’ll just tell you that this is where we sit today. And, again, it is the joint team. It’s everybody coming together. When you think about that air flow, that first part of getting critical stuff in—this, obviously, once we get the sea portion in, the surface bridge, that will be able to deliver a lot of supplies to those people in need in Haiti.

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Again, the person that we care about is that supported commander, that war fighter that’s on the ground, that Joint Task Force commander, General Keene in this case, sitting down in Port au Prince. I will tell you that we are only successful if we make him successful, making General Fraser successful in a hurricane, making General Renuart successful and FEMA successful. That’s how we measure our merit.

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And, again, it’s all about the people, all about them right here. And promise given, promise kept. Again, General Schwartz.

So that gives you a quick update. And I’ll tell you, I think you for the time. Thank you for the extra time to go over the Haiti stuff. But I think it’s—given all the things going on, I knew you would ask me questions about that anyway. But it really does give you an idea how this whole country DOD and the inter-agency will come together. What I ask the USAID folks was, “You got to make sure you get the stuff into the pipeline because that pipeline is now oiled and ready to go. So now it’s time, like the 14th Street Bridge as an example, you can now bring that stuff in and it will flow.

Same thing we told FEMA, same thing we told DLA—so you’ve got DLA, USAID. And then you think about all the non-governmental agencies that can do the same thing. You’ve not got this set and now we’ve just got to control that flow to make sure we don’t

GENERAL TRAUTMAN: Well, I'll go first, Admiral Greenert. That will let you trump me if you want.

ADMIRAL GREENERT: Sure.

GENERAL TRAUTMAN: The Marine Corps' view of electronic, airborne attack is that we are going to keep our Prowlers going until about the 2019 timeframe. We have four squadrons of five Prowlers and they are being used heavily in the current fight. And they need to be available for some unexpected future fight.

We see the future of airborne electronic attack, at least in the Marine Corps, being to leverage the inherent capability of the F35. But also key is the next generation jammer, OSD has wisely, I think, laid out that the next generation jammer will have as a threshold both the F18G and the F35. They've done that because it just makes sense to take advantage of the 3,000 3,500 F35s that will be in the battle space.

And so you may end up with a situation where you fly VLO F35s and then, when it make sense, and when threat drives you to this position that you would put next generation jammer on some of the F35s in the force. That is a potential path. But beyond that we see the expansion of UAS capabilities. And putting some of these systems on unmanned aerial systems in the next decade that heretofore had been mostly on manned systems.

So that is the path that we have taken. The Admiral can talk to the path that the Navy has taken, which is the Growler. The next general jammer, as long as it can be a multi-platform system, I think we are going to be in very good shape as we wait for the unmanned aerial system to evolve as we hope they will.

We have a couple of things that we are doing, a JCTD called *corporal*, where we are getting our nose wet with regard to unmanned systems in the electronic support,

electronic warfare area. And also, we are very excited about software reprogrammable payloads, which also will have a role to play in the unmanned environment.

ADMIRAL GREENERT: I think George summarized it pretty well. I think if I were to put it in a category, we've got to go digital, just as the ISR radar, you know, did with the electronic scan, what that did for us versus a moving scan, if you will, moving parts. So I think it needs to be digital, and expanded in the frequency spectrum to be broader. Also it's about pods, not hard mount in the future. So you can go to UAVs if you need to. You can go to prop. You can go to helo I guess.

And it has to be agile enough, if you will, to be used for IW, irregular warfare, and perhaps MCO. Again, that could involve change in the frequency spectrum, the amplitude, whatever. So it's more about mobility and transferability I think in the future. And you got to be able to share it. So there is an international dimension, probably.

DR. PERRY: Another question?

BRIAN GREEN: Brian Green with Systems Planning and Analysis. Hybrid warfare is a term that has gotten some attention recently in town. I know that the Secretary has used it and it was used several times earlier in the conference. The term of choice among the panelists is still irregular warfare. And I was wondering if I could solicit from the panelists if they have any views about whether there is a difference between the two terms, hybrid warfare and irregular warfare? And if so, what the difference is and whether they think hybrid warfare is a term or concept that has any legs to it.

DR. PERRY: Who wants to take the first cut at that? General McNabb?

GENERAL MCNABB: I will just tell you that to me we are just going to have to be very flexible on the systems that we have that can move all these different ways. Again, the warfighter is going to say, "Sometimes I'm going to need this. Sometimes I'm going to need that", and we are going to have to have multipurpose platforms that we can swing as we need to in support of the warfighters.

And that is across the board. That is every service. And you can see it where we've had those systems and we have been able to adjust them very well. And we have to be thinking that way that you can—and really, hybrid warfare requires that kind of flexibility. Because we don't have the money to have systems for everything. We have to have a system that supports the concept that the war fighting commander will say, "This is what I need to do to win." And we've got to be flexible enough to deal with that.

PANELIST: Brian, I might just add that I think this construct captures a bit of a strategic struggle that is going on in the defining what adversaries might do in the future. I think it clearly acknowledges that you can't discount a conventional, more conventional kind of enemy and a threat. But increasingly, you see actors growing in a spectrum that grows from theater security cooperation through terrorism to countering space threats, countering cyber threats—and an enemy, if you will, that is agile among all of those domains.

So I think this term hybrid warfare is an attempt to try to capture that it is not just irregular. It is not just conventional. It is really a spectrum in between. And we have to be organized, trained and equipped to operate across that spectrum. You know, the war colleges will muse on this some more I'm certain. But I think that is where the Secretary is trying to come up with a way to not limit us but to force us to adapt across a very broad series of operations.

GEN Fridovich: I would like to jump on that one a little bit. It is going to be talked about for a long, long time. And it is going to, I guess, remain still to be defined completely. Probably never will get there completely. If you think in terms of ...(inaudible) in that they know how to politically empower but not avail themselves of the target. Below the line they have got everything they need to project power. They've got everything they need to politically, you know, help run a government or be part of a government and be recognized legitimately. Yet, they still can do things globally with a wide variety of tactical operational, even strategic outcomes engineered with a chain of command.

That might be one of those places to point to and say, “That is truly a hybrid enemy that understands political power, understands not gaining too much where you become an absolute target and then can be disenfranchised from that political power. And they know right where those operations design lines are and stay beneath those. Thinking about that as the higher end of a hybrid enemy, then there are other, lesser I suppose, cases out there that know a little bit about that but haven’t crossed over.

Or you might look from an Israeli perspective. Hamas helped themselves to cross over. And as soon as they do, they become the governance. They avail themselves of the target, especially when they start applying some of their weapons technology outside and breaking the red lines that the Israelis might have.

So when you start thinking about it in those notions, and look and understand globally where there are linkages between those players, then we can start saying, if we understand that part of it, now how do we engineer ourselves to be able to counter that, if that is at all possible. This gets you into alacrity, flexibility but probably more than anything else a very deep understanding of the operational and strategic environment that they are using against you and getting into your decision cycle.

Which is one of the things that I failed to mention, one of the strategic notions of a SOCOM is not to be reactive. It’s to finally get out there and be pro-active and think about where are the opportunities in the globe that we need to get to, where a small investment might have huge dividends in the future—and start mapping the future that way instead of always reacting to things, trying to get out ahead of that. And I think that is really where our next steps are going to be for the next year or two at a minimum if not longer.

But that does start getting back to the notion of the hybrid. Does that come close to answering?

GEN Trautman: I think we are on a slippery slope when we try to characterize warfare with stark terms. We better be ready as warriors to flex between various types of things that we will encounter in the battle space. You may think that you are on occupation duty in Lebanon or the Gaza for years. And you may, indeed, be there. But then, the next thing you need to do is figure out how to integrate fire and maneuver rapidly, and operationalized intelligence—and respond in a wholly different way from the way that the force has been used in the previous months.

Same thing in Iraq. You may be in a COIN environment in Al Anbar and find out you have a very tough urban fight in Fallujah. It is the nature of warfare that you need to be able to flex among the various options that the enemy chooses to place you in.

So I sort of like the term hybrid warfare. I don't know why none of the panelists said it. In my mind, and I think in most of the Marines' mind, a fair description, an apt description of what the future holds for us.

DR. PERRY: General Edgington, did you want to weigh in on this at all?

GENERAL EDGINGTON: I guess I probably need to because General Mattis is one of those who has kind of embraced the hybrid concept. And when he was first reading about it and was just starting to embrace it, it was the Hezbollah, as General Fridovich points out, using RPGs in the second Lebanon war—that a traditional, terrorist enemy is having modern weapons. And so where is the line being drawn?

Getting back to the question, specifically, it dawns on me that we are a society of labels. We need to label something and define it. And there is certainly purpose in that. But as soon as we do, we create the opportunity for seams. And so I think hybrid is probably the best word in the English language to define that. We just have to put aside the boxing, the container-izing of exactly defining what this type of warfare is—and realize, especially in light of the cyber world that we are going into now, and the potential of

where we can get challenged—that warfare can encompass just about anything that we have thought about and probably some things that we haven't thought about.

So let's continue to be open to define the fact that war is not uniformed militaries across the Maginot Line fighting it out like what we had studied in school. It has evolved. But I would tell you that probably in World War I there were flag officers discussing something of this nature of, "Hey! This is a new way of warfare. What is this?" And trying to work on a label for it at that time, too. So I would just resist trying to fully define it and get the concept of the fact that warfare can include just about anything.

DR. PERRY: Does anyone have one, last, burning question? This gentleman right here. And then we will close it there.

Japan Self-Defense Force Officer: I have a question with regard to missile defense. Admiral Greenert, you touched on the missile defense capability somehow. Do you have somehow a joint doctrine or concept of operation to respond to ballistic missile and cruise missiles simultaneously?

ADMIRAL GREENERT: We don't now. I mean we have a concept. If we had what we wanted for radar fire control, but you are talking about a ballistic missile launch simultaneous with a cruise missile launch. I think that is what you said. If you are talking about the same vessel, then that is part of what we would look toward a future radar for, a multi-volume, if you will, radar, multi-level radar. But we do have that concept within the sea base if you will and defense therein.

So, in other words, the concept of operations among several platforms is there today, but we don't have a platform right now today that does both simultaneously.

DR. PERRY: General Renuart.

GENERAL RENUART: I might just add, Jon, there is a joint, integrated air and missile defense construct that is being circulated through the services for final approval. And it is designed to acknowledge that you could have air or ballistic or cruise missile threats near simultaneously. What it attempts to define, and we've been involved with PACOM and the Navy and others in developing this concept, is that it depends upon a system of sensors that allows you to look for both and can capture and characterize and assess, especially low altitude, high speed, low visibility targets, like a cruise missile.

So we are pursuing this forward in the area of homeland defense. But it also has significant impact for deployed forces forward. And I think we still have a little work to do. And there are not yet sensors that allows us to be highly confident that we can capture all of those pieces simultaneously. There are pieces and parts and we are working through that.

DR. PERRY: Well, it only remains for me to thank you all for being with us and giving us your time and the benefit of your vast knowledge, and it was vast. I appreciate it very much. This is the end of the session and we will now have closing remarks by Dr. Pfaltzgraff and General Schwartz. (END OF SESSION)